DEPARTMENT OF FORESTRY AND FIRE PROTECTION
OFFICE OF THE STATE FIRE MARSHAL
STATE FIRE TRAINING
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Date: October 13, 2023

To: Statewide Training and Education Advisory Committee
State Board of Fire Services

From: Chris Fowler, Deputy State Fire Marshal III, Supervisor, CAL FIRE
Joe Bunn, Fire Service Training Specialist III, (Retired), CAL FIRE

SUBJECT/AGENDA ACTION ITEM:
Tower Rescue Technician (2021) New Curriculum

Recommended Actions:
Information/discussion

Background Information:
SFT developed the Tower Rescue Technician curriculum in alignment with National Fire Protection Association (NFPA) 1006: Standard for Technical Rescue Personnel Professional Qualifications, 2021 edition.

Analysis/Summary of Issue:

CTS Guide

- SFT developed a CTS guide for Tower Rescue Technician to document how training standards align with NFPA 1006 (2021).
- One standard was added under OSFM authority; Selecting and Using PPE, Tools, and Equipment. The risk of injury to rescuer and victim is high and the PPE, tools, and equipment are very specific for tower rescue. This information needs to be part of the standard.

Course Plan

- SFT developed a course plan for all emergency personnel who perform tower rescue.
- This course incorporates awareness, operations, and technician training based on NFPA 1006 (2021).

- Prerequisites
    - Rope Rescue Technician (SFT 2013 or 2017, or FEMA)
    - IS-100, IS-200, IS-700, and IS-800 (FEMA)
- Course length is 24 hours (8 lecture / 16 application)
- Maximum class size set at 24
- Instructor-to-student ratio set at 1:24 for lecture and 1:6 for application.
- All instructors counted toward student ratios, including application components, must be SFT Registered Tower Rescue Technician Instructors

Instructor Task Book (Instructor Requirements)

- Be an OSFM certified Instructor 1, Training Instructor I, Fire Instructor I, or an OSFM Registered Instructor
- Complete the Tower Rescue Technician (2021) course
- Complete the Tower Rescue Technician (2021) Instructor Task Book
- Have a minimum of three (3) years' full-time or six (6) years' part-time/volunteer suppression/rescue experience within a recognized fire agency in California
- Provide a letter signed by their Fire Chief or authorized designee that verifies qualification to deliver Tower Rescue Technician (2021) training

Training Record

- Created a Training Record for students to use as verification of skills practiced and completed during the course

Instructor Registration…….…….…….....March 1, 2024

Instructors for the Tower Rescue Technician (2021) curriculum must meet the SFT requirements for Registered Instructor. Instructors must have appropriate education and practical experience relating to the specific course content.

Cadre Members and Existing Registered Instructors

SFT will authorize cadre members and existing Registered Instructors who meet one of the following requirements to teach the Tower Rescue Technician (2021) course:

- Registered Instructor of Rope Rescue Technician (SFT) **and** successful completion of the Tower Rescue Technician roll out course
- Instructor of Rope Rescue Technician (FEMA) **and** successful completion of the Tower Rescue Technician roll out course

SFT will offer Tower Rescue Technician roll out classes in October and December of 2023 and February 2024. SFT will send a registration email to all eligible SFT Rope Rescue Technician Registered Instructors using the email address in the Acadis system. Any existing Registered Instructors that do not complete the roll out by February 29, 2024, shall comply with the New Instructor Registration requirements (below).

SFT will automatically update Acadis after candidates complete the roll out course. The instructor registration application, fire chiefs' letter, and registration fee are not required.

New Instructor Registration

To become a Registered Instructor for this curriculum, a candidate must:

- Be an OSFM Registered Instructor
- Successfully complete the Tower Rescue Technician (2021) course
- Successfully complete the Tower Rescue Technician (2021) Instructor Task Book
- Have a minimum of three (3) years' full-time or six (6) years' part-time/volunteer experience performing suppression/rescue duties within a recognized fire agency in California
- Provide a letter signed by their fire chief or authorized designee that verifies qualification to deliver Tower Rescue Technician training
- Submit an SFT Instructor Registration Application
- Pay the registration fee

Tower Rescue Technician (2021) Implementation Plan

Issued: Month ##, 2023

OVERVIEW

This document is intended to provide information for all State Fire Training (SFT) stakeholders on the new Tower Rescue Technician (2021) curriculum requirements. Stakeholders are encouraged to study this information carefully and seek clarification from SFT if questions arise.

The Tower Rescue Technician (2021) curriculum is presented as a Fire Service Training and Education Program (FSTEP) course. SFT developed a curriculum training standard (CTS) guide, a course plan, an instructor task book, and a student training record based on the current National Fire Protection Association (NFPA) Standard, NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021).

IMPLEMENTATION

Candidates entering the SFT system should enroll in the Tower Rescue Technician (2021) course and comply with the Tower Rescue Technician requirements.

New Curriculum	Hours
Tower Rescue Technician (2021)	**24 hours**

Tower Rescue Technician (2021) Curriculum……..March 1, 2024

INSTRUCTOR REQUIREMENTS

Instructor Registration……..March 1, 2024
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To become a Registered Instructor for this curriculum, a candidate must:

- Be an OSFM Registered Instructor
- Successfully complete the Tower Rescue Technician (2021) course
- Successfully complete the Tower Rescue Technician (2021) Instructor Task Book
- Have a minimum of three (3) years' full-time or six (6) years' part-time/volunteer experience performing suppression/rescue duties within a recognized fire agency in California
- Provide a letter signed by their fire chief or authorized designee that verifies qualification to deliver Tower Rescue Technician training
- Submit an SFT Instructor Registration Application
- Pay the registration fee

POTENTIAL AGENCY IMPACTS

Fire agencies desiring to use the Tower Rescue Technician (2021) curriculum as a requirement for their recruitment/promotion activities need to review the curriculum requirements to be sure that all agency training needs are met. After review, fire agencies should update their job specifications and recruitment documentation to reflect these new courses and certification requirements.

Accredited Regional Training Programs (ARTP), Accredited Local Academies (ALA), community colleges, and all other local delivery venues need to review the curriculum and seek approval from their curriculum committee / program sponsor, as appropriate. ARTPs should review the new Tower Rescue Technician (2021) curriculum and discuss potential impacts with their advisory committees.

Tower Rescue Technician

(NFPA 1006: Tower Rescue Awareness/Operations/Technician)

Curriculum Training Standards Guide (2021)

California Department of Forestry and Fire Protection
Office of the State Fire Marshal
State Fire Training

Tower Rescue

Curriculum Training Standards Guide (2021)

Publication Date: Month Year

This CTS guide utilizes the following NFPA standards to provide the qualifications for State Fire Training's Watercraft Rescue (2021) curriculum:

- NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)

State Fire Training coordinated the development of this CTS guide. Before its publication, the Statewide Training and Education Advisory Committee (STEAC) and the State Board of Fire Services (SBFS) recommended this CTS guide for adoption by the Office of the State Fire Marshal (OSFM).

Cover photo courtesy of Matt O'Donnell, Battalion Chief, Ebbetts Pass Fire District.

Published by State Fire Training.

Table of Contents

Acknowledgements

State Fire Training appreciates the hard work and accomplishments of those who built the solid foundation on which this program continues to grow.

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CAL FIRE

- Joe Tyler, Director
- Daniel Berlant, Acting State Fire Marshal
- Andrew Henning, Assistant Deputy Director: Fire and Life Safety, State Fire Training, Code Development and Analysis
- (Vacant), Chief of State Fire Training
- Mike Richwine, Chair, Statewide Training and Education Advisory Committee (STEAC); State Fire Marshal (retired), CAL FIRE

Cadre – 2023 Curriculum Development

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- Chris Fowler, Cadre Lead, Deputy State Fire Marshal III, Supervisor, CAL FIRE
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- Brook Mancinelli, Captain, San Francisco Fire Department
- Justin Moore, Captain, Fresno City Fire Department
- Matt O'Donnell, Battalion Chief, Ebbetts Pass Fire District
- John Smith, Captain, Los Angeles City Fire Department
- Robert Stine, Fire Fighter/USAR Training Manager, San Bernardino County Fire

How to Read a CTS Guide

Overview

A curriculum training standard (CTS) guide lists the requisite knowledge, skills, and job performance requirements an individual must complete to become certified in a specific job function.

It also documents and justifies the OSFM-approved revisions to the curriculum's NFPA standard and identifies where each curriculum training standard is taught (course plan), tested (skill sheets), and validated (task book).

Individuals aspiring to meet State Fire Training's curriculum training standards must do so in accordance with the codes, standards, regulations, policies, and standard operating procedures applicable within their own agency or jurisdiction.

Format

Each curriculum training standard is comprised of eight sections.

Section Heading
Training standards are grouped by section headings that describe a general category. For example, the Fire Fighter 1 CTS guide includes the following section headings: NFPA Requirements, Fire Department Communications, Fireground Operations, and Preparedness and Maintenance.

Training Standard Title
The training standard title provides a general description of the performance requirement contained within the individual standard.

Authority
The CTS guide references each individual standard with one or more paragraphs of the corresponding National Fire Protection Association (NFPA) Professional Qualifications. This ensures that each fire service function within California's certification system meets or exceeds NFPA standards.

When California requirements exceed the NFPA standard, the CTS guide cites the Office of the State Fire Marshal as the authority and prints the corresponding information shaded gray.

Job Performance Requirements
This segment includes a written statement that describes a specific job-related task, the items an individual needs to complete the task, and measurable or observable outcomes.

Requisite Knowledge
This segment lists the knowledge that an individual must acquire to accomplish the job performance requirement.

Requisite Skills
This segment lists the skills that an individual must acquire to accomplish the job performance requirement.

Content Modification
This table documents and justifies any revisions to the NFPA standard that the development or validation cadres make during the development of a CTS guide.

Cross Reference
This table documents where each training standard is taught (course plan), tested (skill sheets), and validated (task book).

Tower Rescue

Section 1: Awareness

1-1: Performing a Rescue from Elevated Devices

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
    - Paragraph 4.1.1

Job Performance Requirement

Perform the rescue of a person from a tower while working from group ladders, aerial ladders, or other elevated devices employed by the AHJ, given an incident not requiring the rescuer to be solely supported by the tower, so that the patient is transferred from the tower to the elevated device, the agency's protocol for the use of the device is followed, and the risks to the victim and rescuer are minimized.

Requisite Knowledge

1. Describe how to use ladders or elevated devices for tower rescue
2. Describe specific procedures for using ladders or elevated devices in victim transfer from a tower

Requisite Skills

1. Work from or operate ladders or elevated devices capable of accessing and rescuing the tower victim and providing positive transfer from the tower to the aerial while providing fall protection for the victim and rescue personnel

Content Modification

Block	Modification	Justification
RK1	Changed "familiarization with the use of" to "Describe how to use"	Adjusted for grammar.
RK1	Added "for tower rescue".	Added to narrow scope.

Cross Reference

Course Plan	Training Record	Task Book
Tower Rescue Technician (2021) • Topic 5-1	Tower Rescue Technician (2021) • Skill 23 • Skill 24 • Skill 25 • Skill 26	Tower Rescue Technician (2021) Instructor Task Book • JPR 14 • JPR 22

1-2: Sizing Up an Incident

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
   - Paragraph 4.1.2

Job Performance Requirement

Size up a tower rescue incident, given background information and applicable reference materials, so that the scope of the rescue is determined, the number of victims are identified, the last reported location of all victims is established, witnesses and reporting parties are identified and interviewed, resource needs are assessed, primary search parameters are identified, and information required to develop an initial incident action plan is obtained.

Requisite Knowledge

1. Describe types of reference materials and their uses
2. Describe availability and capability of resources
3. Describe elements of an incident action plan and related information
4. Describe relationship of the size-up to the incident management system
5. Describe information gathering techniques and how that information is used in the size-up process
6. Describe basic search criteria for tower rescue incidents

Requisite Skills

1. Read technical rescue reference materials
2. Gather information
3. Use interview techniques
4. Relay information
5. Use information-gathering sources

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Tower Rescue Technician (2021) • Topic 3-1	Tower Rescue Technician (2021) • Skill 1	Tower Rescue Technician (2021) Instructor Task Book • JPR 3 • JPR 22

1-3: Recognizing Incident Hazards and Initiating Isolating Procedures

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
    - Paragraph 4.1.3

Job Performance Requirement

Recognize incident hazards and initiate isolation procedures, given scene control barriers, personal protective equipment (PPE), requisite equipment, and available specialized resources, so that all hazards are identified; resource application fits the operational requirements; hazard isolation is considered; risks to rescuers, bystanders, and victims are minimized; and rescue time constraints are taken into account.

Requisite Knowledge

1. Describe resource capabilities and limitations
2. Describe types and nature of incident hazards
3. Describe equipment types and their use
4. Describe isolation terminology, methods, equipment, and implementation
5. Describe operational requirement concerns
6. Describe common types of rescuer and victim risks
7. Describe risk/benefit analysis methods and practices
8. Describe methods for controlling access to the scene
9. Describe types of technical references

Requisite Skills

1. Identify resource capabilities and limitations
2. Identify incident hazards
3. Assess potential hazards to rescuers and bystanders
4. Place scene control barriers
5. Operate control and mitigation equipment

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Tower Rescue Technician (2021) • Topic 3-3 (RK1, RK2, RK3, RK4, RK5, RK8, RK9) • Topic 3-1 (RK6, RK7)	Tower Rescue Technician (2021) • Skill 4	Tower Rescue Technician (2021) Instructor Task Book • JPR 5 • JPR 22

1-4: Recognizing the Need for Technical Rescue Resources

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
    - Paragraph 4.1.4

Job Performance Requirement

Recognize the need for technical rescue resources at an operations- or technical-level incident, given AHJ guidelines, so that the need for additional resources is identified, the response system is initiated, the scene is secured and rendered safe until additional resources arrive, and awareness-level personnel are incorporated into the operational plan.

Requisite Knowledge

1. Describe operational protocols
2. Identify specific planning forms
3. Describe types of incidents common to the AHJ
4. Describe hazards
5. Describe incident support operations and resources
6. Describe safety measures

Requisite Skills

1. Apply operational protocols
2. Select specific planning forms based on types of incidents
3. Identify and evaluate various types of hazards within the AHJ
4. Request support and resources
5. Determine required safety measures

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Tower Rescue Technician (2021) • Topic 3-2	Tower Rescue Technicians (2021) • Skill 3	Tower Rescue Technician (2021) Instructor Task Book • JPR 4 • JPR 22

1-5: Supporting an Operations- or Technician-level Incident

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
    - Paragraph 4.1.5

Job Performance Requirement

Support an operations- or technician-level incident, given an incident, an assignment, an incident action plan, and resources from the tool cache, so that the assignment is carried out, progress is reported to command, environmental concerns are managed, personnel rehabilitation is facilitated, and the incident action plan is supported.

Requisite Knowledge

1. Describe AHJ operational protocols
2. Describe hazard recognition
3. Describe incident management
4. Describe PPE selection
5. Describe resource selection and use
6. Describe scene support requirements

Requisite Skills

1. Apply operational protocols
2. Function within an incident management system
3. Follow and implement an incident action plan
4. Report the task progress status to a supervisor or incident command

Content Modification

Block	Modification	Justification
JPR	Changed “kit” to “cache”.	Agencies do not have specific tower rescue tool kits; they assemble tools as needed from their general tool cache.

Cross Reference

Course Plan	Training Record	Task Book
Tower Rescue Technician (2021) • Topic 3-6	Tower Rescue Technician (2021) • Skill 8	Tower Rescue Technician (2021) Instructor Task Book • JPR 8 • JPR 22

Section 2: Operations

2-1: Participating in a Pre-rescue Survey

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
    - Paragraph 4.2.1

Job Performance Requirement

Participate in a pre-rescue survey, given a tower rescue preplan, the specific tower targeted in the preplan, an operations-level tower rescue tool cache, and a tower rescue team, so that the targeted elevation in the tower is attained using the tools and techniques designated for use during a rescue operation, all elements of the rescue plan are implemented, and the full scope of the plan is exercised.

Requisite Knowledge

1. Evaluate a tower preplan
2. Describe contents and use of the operations-level tower rescue tool cache
3. Describe organizations' policies and procedures for tower rescue operations

Requisite Skills

1. Climb tower to the designated height
2. Select and transport designated tools

Content Modification

Block	Modification	Justification
JPR	Changed "kit" to "cache".	Agencies do not have specific tower rescue tool kits; they assemble tools as needed from their general tool cache.
RK2	Changed "kit" to "cache".	Agencies do not have specific tower rescue tool kits; they assemble tools as needed from their general tool cache.

Cross Reference

Course Plan	Training Record	Task Book
Tower Rescue Technician (2021) • Topic 5-2	Tower Rescue Technician (2021) • Skill 27	Tower Rescue Technician (2021) Instructor Task Book • JPR 15 • JPR 22

2-2: Isolating and Managing Exposure to Potentially Harmful Energy Sources

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
   - Paragraph 4.2.2

Job Performance Requirement

Isolate and manage exposure to potentially harmful energy sources found in erected structures, including power systems such as mechanical radio frequency (RF), and electrical hazards, given lock-out tag-out (LOTO) equipment and construction materials and PPE, so that all hazards are identified, systems are managed, beneficial system use is evaluated, and hazards to rescue personnel and victims are minimized.

Requisite Knowledge

1. Describe types and uses of PPE
2. Describe hazardous energy monitoring and testing equipment
3. Describe types of energy sources
4. Describe system isolation methods
5. Describe specialized system features
6. Describe tools for disabling hazards
7. Describe policies and procedures of the AHJ

Requisite Skills

1. Select and use hazard-specific PPE
2. Use monitor and test equipment
3. Identify hazards
4. Operate beneficial systems in support of tactical objectives
5. Operate tools and devices for securing and disabling hazards
6. Engage in practices that minimize exposure to known or suspected hazards

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Tower Rescue Technician (2021) • Topic 3-4	Tower Rescue Technician (2021) • Skill 5 • Skill 6	Tower Rescue Technician (2021) Instructor Task Book • JPR 6 • JPR 22

2-3: Assessing the Integrity of a Tower Structure

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
   - Paragraph 4.2.3

Job Performance Requirement

Assess the integrity of the tower structure and related components, given an incident, a pre-climb checklist, and an unobstructed climb path, so that safe access to the victim is assured, and ensure any integrated safety systems, such as vertical lifelines (e.g., cable or rail-type structure), are accessible.

Requisite Knowledge

1. Describe types of structures within area of response, including self-supported, lattice-type, guyed, monopole, or nonstandard-type towers
2. Describe potential structural compromise that would create additional hazards to rescuers

Requisite Skills

1. Perform physical inspection of accessible tower components in accordance with a pre-climb checklist

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Tower Rescue Technician (2021) • Topic 3-5	Tower Rescue Technician (2021) • Skill 7	Tower Rescue Technician (2021) Instructor Task Book • JPR 7 • JPR 22

2-4: Utilizing Fall Protection and Positioning Equipment

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
   - Paragraph 4.2.4

Job Performance Requirement

Recognize, identify, and utilize typical fall protection and work positioning equipment used by climbers, given a specific tower structure, so that the victim can be transferred to the rescue system.

Requisite Knowledge

1. Describe how to review tower rescue preplan to gain familiarity with tower climber safety and work positioning equipment

Requisite Skills

1. Operate tower climber safety and work positioning equipment

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Tower Rescue Technician (2021) • Topic 3-8	Tower Rescue Technician (2021) • Skill 11	Tower Rescue Technician (2021) Instructor Task Book • JPR 10 • JPR 22

2-5: Ascending a Tower

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
   - Paragraph 4.2.5

Job Performance Requirement

Perform an ascent using proper PPE and safe climbing technique equipment, given an incident, so that access to the level of the victim is achieved.

Requisite Knowledge

1. Describe how to determine proper PPE, given the type of tower structure and integrated temporary or permanent safety systems, to perform safe climbing techniques

Requisite Skills

1. Don appropriate PPE, including but not limited to fall protection, helmet, and gloves as appropriate
2. Use 100 percent tie off or vertical lifeline equipment systems to ascend the tower structure

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Tower Rescue Technician (2021) • Topic 5-3	Tower Rescue Technician (2021) • Skill 28 • Skill 29 • Skill 32 • Skill 33	Tower Rescue Technician (2021) Instructor Task Book • JPR 16 • JPR 22

2-6: Transferring Between the Ladder or Climbing Peg Safety System

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
   - Paragraph 4.2.6

Job Performance Requirement

Perform transfer between the ladder or climbing peg safety system, given an incident, so that tie off is maintained, equipment is utilized, and procedures are followed as part of identified rescue plan.

Requisite Knowledge

1. Describe engagement and disengagement procedures from vertical lifeline cable or rope grabs
2. Describe how to use Y-lanyard and work positioning lanyards

Requisite Skills

1. Perform safe transfer between integrated vertical lifeline systems
2. Climb and maneuver on the tower structure while maintaining tie off

Content Modification

Block	Modification	Justification
RK1	Removed “familiarity with the”.	Adjusted for grammar.

Cross Reference

Course Plan	Training Record	Task Book
Tower Rescue Technician (2021) • Topic 5-3	Tower Rescue Technician (2021) • Skill 30 • Skill 31	Tower Rescue Technician (2021) Instructor Task Book • JPR 16 • JPR 22

2-7: Assessing a Victim

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
    - Paragraph 4.2.7

Job Performance Requirement

Assess a victim in a tower environment according to the rescue preplan, given an incident, so that the risks from a fall are minimized or eliminated, the patient is accessed, and the objective is achieved.

Requisite Knowledge

1. Describe tactics identified in the rescue preplan
2. Describe fall factors and methods for reducing them for a rescuer performing tower climbing operations

Requisite Skills

1. Implement the tactics and employ the tools identified in the preplan to achieve the objective

Content Modification

Block	Modification	Justification
RK2	Removed “an understanding of”.	Adjusted for grammar.

Cross Reference

Course Plan	Training Record	Task Book
Tower Rescue Technician (2021) • Topic 4-1 (JPR, RS1) • Topic 3-1 (RK1) • Topic 3-8 (RK2)	Tower Rescue Technician (2021) • Skill 13	Tower Rescue Technician (2021) Instructor Task Book • JPR 12 • JPR 22

2-8: Removing a Victim from a Preplanned Tower Environment

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
    - Paragraph 4.2.8

Job Performance Requirement

Perform the removal of a victim from a preplanned tower environment, given an incident, a rescue preplan, and a prescribed means of removal of the victim to the objective, so that risks to victims and rescuers are minimized, all the elements of the preplan are complied with, and the objective is achieved.

Requisite Knowledge

1. Describe tactics identified in the rescue preplan for the removal of a victim on a tower

Requisite Skills

1. Employ tactics identified in the rescue preplan for the removal of a victim on a tower

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Tower Rescue Technician (2021) • Topic 4-2 (JPR, RK1) • Topic 3-1 (RS1)	Tower Rescue Technician (2021) • Skill 14 • Skill 15 • Skill 16 • Skill 17 • Skill 18 • Skill 19 • Skill 20 • Skill 21 • Skill 22	Tower Rescue Technician (2021) Instructor Task Book • JPR 13 • JPR 22

2-9: Directing a Team to Remove a Victim from a Preplanned Tower Environment

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
    - Paragraph 4.2.9

Job Performance Requirement

Direct a team in removal of a victim from a preplanned tower environment, given an incident, a rescue preplan, and a prescribed means of removal of the victim to the objective, so that risks to victims and rescuers are minimized, all the elements of the preplan are complied with, and the objective is achieved.

Requisite Knowledge

1. Describe tactics identified in the rescue preplan for the removal of a victim on a tower

Requisite Skills

1. Direct the employment of tactics identified in the rescue preplan for the removal of a victim on a tower

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Tower Rescue Technician (2021) • Topic 5-7	Tower Rescue Technician (2021) • Skill 43	Tower Rescue Technician (2021) Instructor Task Book • JPR 20 • JPR 22

2-10: Developing and Adhering to Contingency Plans

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
   - Paragraph 4.2.10

Job Performance Requirement

Develop and adhere to contingency plans for when inclement weather or other factors make operations-level response ineffective or dangerous to rescuers, given an incent, so that a risk/benefit decision can be made.

Requisite Knowledge

1. Describe AHJ policies and procedures
2. Describe risk versus benefit analysis application
3. Describe site safety and hazard control techniques
4. Describe pre-incident rescue action planning

Requisite Skills

1. Apply policies and protocols, risk versus benefit analysis information, pre-incident planning data, risk management, and site safety control techniques

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Tower Rescue Technician (2021) • Topic 3-1 (RK1, RK2, RK4, RS1) • Topic 3-3 (RK3, RS1)	Tower Rescue Technician (2021) • Skill 2	Tower Rescue Technician (2021) Instructor Task Book • JPR 3 • JPR 22

2-11: Terminating an Incident

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
    - Paragraph 4.2.11

Job Performance Requirement

Terminate an incident, given PPE specific to the incident, isolation barriers, and tool cache, so that rescuers and bystanders are protected and accounted for during termination operations, the party responsible is notified of any modification or damage created during the operational period, documentation of loss or materials use is accounted for, scene documentation is performed, scene control is transferred to a responsible party, potential or existing hazards are communicated to that responsible party, debriefing and post-incident analysis and critique are considered, and command is terminated.

Requisite Knowledge

1. Describe PPE characteristics
2. Describe hazard and risk identification
3. Describe isolation techniques
4. Describe statutory requirements identifying responsible parties
5. Describe accountability system use
6. Describe reporting methods
7. Describe post-incident analysis techniques

Requisite Skills

1. Select and use hazard-specific PPE
2. Decontaminate PPE
3. Use barrier protection techniques
4. Collect data
5. Follow record-keeping/reporting protocols
6. Conduct post-incident analysis activities

Content Modification

Block	Modification	Justification
JPR	Changed “kit” to “cache”.	Agencies do not have specific tower rescue tool kits; they assemble tools as needed from their general tool cache.
RS2	Changed “decontamination” to “Decontaminate PPE”.	Adjusted to match other NFPA 1006 paragraphs.
RS3	Added “use”.	NFPA did not provide a verb.
RS4	Changed “data collection” to “Collect data”.	Adjusted to match other NFPA 1006 paragraphs.

RS5	Added “follow”.	NFPA did not provide a verb.
RS6	Added “conduct”.	NFPA did not provide a verb.

Cross Reference

Course Plan	Training Record	Task Book
Tower Rescue Technician (2021) • Topic 6-1	Tower Rescue Technician (2021) • Skill 44	Tower Rescue Technician (2021) Instructor Task Book • JPR 21 • JPR 22

2-12: Selecting and Using PPE, Tools, and Equipment

Authority

1. Office of the State Fire Marshal

Job Performance Requirement

Select, operate, and use personal protective equipment (PPE), tools, and equipment, given a tower rescue incident and AHJ policies and procedures, so that PPE, tools, and equipment are appropriate to incident response needs, donned and worn correctly, and used in accordance with manufacturer specifications and all applicable policies and procedures.

Requisite Knowledge

1. Identify PPE used during tower rescue incidents
2. Identify protections provided by PPE during tower rescue incidents
3. Identify limitations of PPE during tower rescue incidents
4. Identify when and how to don and doff PPE
5. Describe how to use tower rescue tools and equipment
6. Identify guidelines for cleaning, inspecting, and maintaining tools and equipment
7. Describe methods for cleaning tools and equipment
8. Identify when and how to remove tools and equipment from service

Requisite Skills

1. Don and doff PPE
2. Select, use, and maintain tools and equipment

Content Modification

Block	Modification	Justification
CTS	Created a new standard.	The risk of injury to rescuer and victim is high and the PPE, tools, and equipment are very specific for tower rescue. This information needs to be part of the standard.

Cross Reference

Course Plan	Training Record	Task Book
Tower Rescue Technician (2021) • Topic 3-7	Tower Rescue Technician (2021) • Skill 9 • Skill 10	Tower Rescue Technician (2021) Instructor Task Book • JPR 10 • JPR 22

Section 3: Technician

3-1: Directing a Tower Rescue Team

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
   - Paragraph 4.3.1

Job Performance Requirement

Direct a tower rescue team, given a tower rescue scenario, incident action plan, pre-incident plan data, and resources from the tower rescue took cache, so that resources are deployed to best advantage, the incident action plan is supported, and objectives are attained.

Requisite Knowledge

1. Describe AHJ policies and procedures
2. Describe incident management
3. Describe site safety and hazard control techniques
4. Describe preplan usage

Requisite Skills

1. Interpret and apply policies and protocols
2. Initiate and operate within the IMS
3. Demonstrate situational awareness
4. Interpret and apply pre-incident planning data
5. Employ risk management
6. Use site safety control techniques

Content Modification

Block	Modification	Justification
JPR	Changed “kit” to “cache”.	Agencies do not have specific tower rescue tool kits; they assemble tools as needed from their general tool cache.
RS3	Added “demonstrate”.	NFPA did not provide a verb.
RS5	Added “employ”.	NFPA did not provide a verb.
RS6	Added “use”.	NFPA did not provide a verb.

Cross Reference

Course Plan	Training Record	Task Book
Tower Rescue Technician (2021) • Topic 5-7	Tower Rescue Technician (2021) • Skill 43	Tower Rescue Technician (2021) Instructor Task Book • JPR 20 • JPR 22

3-2: Developing an Incident Action Plan for a Tower Incident on a Structure that Accommodates Only One Rescuer

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
    - Paragraph 4.3.2

Job Performance Requirement

Develop an incident action plan for a tower rescue incident on a structure whose size, shape, or configuration would accommodate only one rescuer, given a tower rescue scenario, so that sources are identified and managed, fall protection is maintained throughout the event, anchor points are identified and utilized to best advantage, and the incident action plan objectives are met.

Requisite Knowledge

1. Describe AHJ policies and procedures
2. Describe data gathering and collection methods
3. Describe climbing plan elements
4. Describe anchor point identification and construction methods
5. Describe hazardous energy source recognition
6. Describe identification and control methods
7. Describe free climb ascent and descent techniques
8. Describe fall protection methods

Requisite Skills

1. Conduct size up and assessment
2. Identify and control hazards
3. Identify and control hazardous energy sources
4. Use monitoring equipment to detect hazardous energy sources
5. Construct anchor and belay systems
6. Select PPE and other resources from the tower rescue tool cache

Content Modification

Block	Modification	Justification
JPR	Changed “kit” to “cache”.	Agencies do not have specific tower rescue tool kits; they assemble tools as needed from their general tool cache.
RS1	Added “conduct”.	NFPA did not provide a verb.
RS6	Changed “kit” to “cache”.	Agencies do not have specific tower rescue tool kits; they assemble tools as needed from their general tool cache.

Cross Reference

Course Plan	Training Record	Task Book
Tower Rescue Technician (2021) • Topic 3-9 (RK1, RK2, RK3, RK4, RK5, RK6, RK7, RK8) • Topic 3-1 (RS1) • Topic 3-4 (RS2, RS3, RS4) • Topic 3-7 (RS5, RS6)	Tower Rescue Technician (2021) • Skill 12	Tower Rescue Technician (2021) Instructor Task Book • JPR 11 • JPR 22

3-3: Ascending a Tower to Conduct a Rescue

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
   - Paragraph 4.3.3

Job Performance Requirement

Ascend a simulated or actual tower to conduct a rescue, given an incident action plan and a pre-climb checklist, so that the pre-climb checklist and hazard control measures are implemented; fall protection systems are utilized; and the rescuer moves both horizontally and vertically between structural elements of the tower, with or without the benefit of climbing pegs, ladders, or vertical lifelines, to achieve the objectives of the incident action plan.

Requisite Knowledge

1. Describe an incident action plan
2. Describe a pre-climb checklist
3. Describe identification of site-specific tower features and components
4. Describe type- and hazard-specific PPE selection
5. Describe climbing plan

Requisite Skills

1. Use incident action plans
2. Develop and use pre-climbing checklists and site safety plans, types of fall protection, and lifeline systems
3. Identify tower anatomy and features
4. Perform climbing techniques and methods

Content Modification

Block	Modification	Justification
RS3	Added “identify”.	NFPA did not provide a verb.
RS4	Added “perform”.	NFPA did not provide a verb.

Cross Reference

Course Plan	Training Record	Task Book
Tower Rescue Technician (2021) • Topic 2-1 (RK3, RS3) • Topic 3-7 (RK4) • Topic 3-9 (RK1, RS1) • Topic 5-3 (RK2, RK5, RS2, RS4)	Tower Rescue Technician (2021) • Skill 28 • Skill 29	Tower Rescue Technician (2021) Instructor Task Book • JPR 16 • JPR 22

3-4: Rescuing a Victim Suspended from an Elevated Position from the Ground

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
    - Paragraph 4.3.4

Job Performance Requirement

Perform a ground-based tower rescue requiring the rescue of a suspended victim from an elevated position, given an incident action plan, climbing plan, hazard-specific PPE, and resources from the tower rescue tool cache, so that the victim is released/transferred from an existing fall arrest system to one created by the rescuer, and the victim is moved both horizontally and vertically a distance representative of the rescue environment.

Requisite Knowledge

1. Describe an incident action plan
2. Describe hazard and risk assessment
3. Describe climbing plan elements
4. Describe PPE selection and use
5. Describe types of fall protection systems
6. Describe fall protection system transfer procedures
7. Describe horizontal and vertical movement methods

Requisite Skills

1. Assess a scene
2. Use hazard control techniques
3. Use and apply PPE
4. Operate fall protection systems
5. Use horizontal and vertical climbing and movement techniques

Content Modification

Block	Modification	Justification
JPR	Changed “kit” to “cache”.	Agencies do not have specific tower rescue tool kits; they assemble tools as needed from their general tool cache.
RS2	Added “use”.	NFPA did not provide a verb.
RS5	Added “use”.	NFPA did not provide a verb.

Cross Reference

Course Plan	Training Record	Task Book
Tower Rescue Technician (2021) • Topic 5-4 (JPR, RK7, RS5) • Topic 3-9 (RK1, RK3) • Topic 3-1 (RK2, RS1) • Topic 3-7 (RK4, RS3) • Topic 3-8 (RK5, RK6, RS4) • Topic 3-3 (RS2)	Tower Rescue Technician (2021) • Skill 34 • Skill 35 • Skill 36	Tower Rescue Technician (2021) Instructor Task Book • JPR 17 • JPR 22

3-5: Rescuing a Victim Suspended from a Height Beyond the Scope of a Ground-based Rope Rescue System

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
    - Paragraph 4.3.5

Job Performance Requirement

Perform a rescue requiring the rescue of a victim suspended from a tower at a height beyond the scope of a ground-based rope rescue system, given an incident action plan, climbing plan, hazard-specific PPE, and resources from the tower rescue tool cache, so that the victim is transferred to the rescue system and is moved both horizontally and vertically a distance representative of the rescue environment.

Requisite Knowledge

1. Describe incident action plan
2. Describe hazard and risk assessment
3. Describe climbing plan elements
4. Describe PPE selection and use
5. Describe types of fall protection systems
6. Describe fall protection system transfer procedures
7. Describe horizontal and vertical movement methods

Requisite Skills

1. Assess a scene
2. Use hazard control techniques
3. Use and apply PPE
4. Operate fall protection systems
5. Use horizontal and vertical climbing and movement techniques
6. Use tower-based rescue techniques

Content Modification

Block	Modification	Justification
JPR	Changed “kit” to “cache”.	Agencies do not have specific tower rescue tool kits; they assemble tools as needed from their general tool cache.
RS2	Added “use”.	NFPA did not provide a verb.
RS5	Added “use”.	NFPA did not provide a verb.
RS6	Added “use”.	NFPA did not provide a verb.

Cross Reference

Course Plan	Training Record	Task Book
Tower Rescue Technician (2021) • Topic 5-5 (JPR, RK7, RS5, RS6) • Topic 3-9 (RK1, RK3) • Topic 3-1 (RK2, RS1) • Topic 3-7 (RK4, RS3) • Topic 3-8 (RK5, RK6, RS4) • Topic 3-3 (RS2)	Tower Rescue Technician (2021) • Skill 37 • Skill 38 • Skill 39	Tower Rescue Technician (2021) Instructor Task Book • JPR 18 • JPR 22

3-6: Rescuing a Victim Using Multiple Sets of Sequential Rope Systems

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
    - Paragraph 4.3.6

Job Performance Requirement

Perform a lowering operation of a victim from a tower or elevated structure where the travel path or height of the objective requires establishment of multiple sets of sequential rope systems, given a tower rescue scenario and a tower rescue tool cache, so that the victim is protected from a fall, rope movement is managed without entanglement, and the objective is achieved.

Requisite Knowledge

1. Describe incident action plan
2. Describe hazard and risk assessment
3. Describe climbing plan elements
4. Describe PPE selection and use
5. Describe types of fall protection systems
6. Describe fall protection system transfer procedures
7. Describe horizontal and vertical movement methods

Requisite Skills

1. Assess a scene
2. Use hazard control techniques
3. Use and apply PPE
4. Operate fall protection systems
5. Use horizontal and vertical climbing and movement techniques
6. Use tower-based rescue techniques

Content Modification

Block	Modification	Justification
JPR	Changed “kit” to “cache”.	Agencies do not have specific tower rescue tool kits; they assemble tools as needed from their general tool cache.
RS1	Added “use”.	NFPA did not provide a verb.
RS5	Added “use”.	NFPA did not provide a verb.
RS6	Added “use”.	NFPA did not provide a verb.

Cross Reference

Course Plan	Training Record	Task Book
Tower Rescue Technician (2021) • Topic 5-6 (JPR, RK7, RS5, RS6) • Topic 3-9 (RK1, RK3) • Topic 3-1 (RK2, RS1) • Topic 3-7 (RK4, RS3) • Topic 3-8 (RK5, RK6, RS4) • Topic 3-3 (RS2)	Tower Rescue Technician (2021) • Skill 40 • Skill 41 • Skill 42	Tower Rescue Technician (2021) Instructor Task Book • JPR 19 • JPR 22

Tower Rescue Technician (2021)

Course Plan

Course Details

Description: This course provides the knowledge and skills to prepare an emergency responder to conduct tower rescue operations in a safe and effective manner in accordance with AHJ policies and procedures. Topics include tower construction; standards and regulations; incident size up and planning; victim management; rescue operation from ladders, elevated platforms, ground-based control systems, tower-based control systems, and multiple control systems; and incident termination. This course incorporates awareness, operations, and technician training based on NFPA 1006 (2021).

Designed For: Fire fighters with three years' full-time or six years' part-time/volunteer experience and any emergency personnel who perform tower technical rescue.

Prerequisites: Rope Rescue Technician (SFT 2013 or 2017, or FEMA)

IS-100, IS-200, IS-700, and IS-800 (FEMA)

Standard: Attend and participate in all course sections

Successful completion of all skills identified on the Training Record

Hours: 24 hours

(8 hours lecture / 16 hours application)

Max Class Size: 24

Instructor Level: SFT Registered Tower Rescue Technician Instructor

Instructor/Student Ratio: 1:24 (lecture)

1:6 (application)

Restrictions: All instructors counted toward student ratios, including application components, must be SFT Registered Tower Rescue Technician Instructors.

SFT Designation: FSTEP

Table of Contents

Required Resources

Instructor Resources

To teach this course, instructors need:

- FIRESCOPE ICS 162
- National Institute of Occupational Safety and Health (NIOSH)
    - Evaluation of Radiofrequency Radiation Exposures at an Atomic Time Radio Station (www.cdc.gov/niosh/hhe/reports/pdfs/2011-0097-3200.pdf)
- National Fire Protection Association (NFPA)
    - 1006: Standard for Technical Rescue Personnel Professional Qualifications (current edition)
    - 2500: Standard for Operations and Training for Technical Search and Rescue Incidents and Life Safety Rope and Equipment for Emergency Service (current edition)
- National Association of Tower Erectors (NATE)
    - Safety Resources
- American National Standards Institute (ANSI)
    - Z359 (fall protection)
    - Z490 (training)
    - 10.48 (safety practices)
- Occupational Safety and Health Administration (Fed/OSHA)
    - 1910.140 (fall protection systems)
- California Division of Occupational Safety and Health (Cal/OSHA)
    - 1670 (fall arrest, fall restraint, positioning devices)
    - 3270 (general access)
    - 3270.1 (use of rope access equipment)
    - 5085 (radiofrequency and microwave radiation)
- Full personal protective equipment per AHJ requirements (including helmet, eye protection, gloves, boots, long sleeve shirt, and pants)

Online Instructor Resources

The following instructor resources are available online at https://osfm.fire.ca.gov/divisions/state-fire-training/fstep-curriculum/

- None

Student Resources

To participate in this course, students need:

- Full personal protective equipment per AHJ requirements (including helmet, eye protection, gloves, boots, long sleeve shirt, and pants)

Facilities, Equipment, and Personnel

Facilities

The following facilities are required to deliver this course:

- Standard learning environment or facility, which may include:
  - Writing board or paper easel chart
  - Markers, erasers
  - Amplification devices
  - Projector and screen
  - Laptop or tablet with presentation or other viewing software
  - Internet access with appropriate broadband capabilities
- A Tower Rescue Technician training site with the NFPA 1006 required facilities, structures, work areas, materials, props, tools, and equipment of adequate size, type, and quantity to fully and safely support the cognitive and psychomotor training required to deliver the curriculum

Equipment

Student safety is of paramount importance when conducting the type of high-risk training associated with this Tower Rescue Technician (2021) course.

- The equipment listed below is the minimum for the delivery of this course.
- The student is responsible for providing all PPE and ensuring that all PPE meets AHJ and site requirements.
- For all tools and equipment, ensure that you have the power source, operating supplies (blades, fuel, etc.), cleaning supplies, and appropriate PPE.

The following equipment is required to deliver this course:

Quantity Per 12-person Squad	Required Equipment
Determined by scenario	Rope, static kernmantle, general use, w/rope bag
4	Descent control devices
Determined by scenario	Carabiners, locking
4	Cable/wire anchors with covers and manufacturer-approved connections
8	Pulleys, single
4	Pulleys, double
6	Prusik loops, short
6	Prusik loops, long
8	Webbing, orange, 1”x20’
8	Webbing, blue, 1”x15’
8	Webbing, yellow, 1”x12’
8	Webbing, green, 1”x6’

Determined by scenario	Anchor straps
Determined by scenario	Collection plates (AHJ)
2	Mobile rope grab (ASAP® or equivalent)
Determined by scenario	Edge protection (based on facility needs)
6	Harnesses, commercial class III
1	Harness, victim, pelvic
1	Harness, victim, chest
Determined by scenario	Rope rescue gear bags
1	SKED or litter basket with pre-rig or equivalent
4	Double bypass lanyards
4	Work position straps (Petzl Grillion or similar)
1	Ladder, fire service, length appropriate for site
2	Personal mechanical advantage (set of fours)
1	Lock-out Tag-out kit (LOTO)
Quantity Per 12-Person Squad	**Recommended Equipment**
Determined by scenario	Radiofrequency meter
Determined by scenario	Gaussmeter (hot stick)
Determined by scenario	Reach pole
Determined by scenario	Rescue mannequin
Determined by scenario	Short multi-loop straps
Determined by scenario	Long multi-loop straps
2	Etrier or equivalent foot loops
4	Ascenders (handheld preferred)
4	Cable/pile grab
Determined by scenario	Pickets, steel or equivalent
Determined by scenario	Artificial high directional
Determined by scenario	Mechanical winch or Capstan
Determined by scenario	Knot passing pulleys
Determined by scenario	Swivels
Determined by scenario	Dynamic rope, lead climbing (AHJ-specific lengths)
Determined by scenario	Lead climbing equipment (e.g., Azzard)
Determined by scenario	Radio communications equipment (for each member)
Determined by scenario	Binoculars
Determined by scenario	Elevated platform or aerial

Training Props

The following training props are required to deliver this course:

- Any individual or combination of towers or structures that can accommodate the ability to:
    - Ascend a 20-foot minimum height
    - Climb using a ladder, climbing pegs, or lattice
    - Move laterally a minimum of 10 feet
    - Use multiple control systems in combination for victim rescue

The course provider or agency assumes all responsibility, liability, and maintenance for the engineering design, strength, stability, and adequacy of all props. The provider or agency further assumes all responsibility, liability, and maintenance for all tools, equipment, and supplies used at the site for the delivery of a Tower Rescue Technician class.

Personnel

The following personnel are required to deliver this course:

- Any instructor counted toward student ratios must be an SFT Registered Tower Rescue Technician (2021) Instructor.

Time Table

Segment	Lecture	Application	Unit Total
Unit 1: Introduction			
Topic 1-1: Orientation and Administration	0.5	0.0	
Unit 1 Totals	**0.5**	**0.0**	**0.50**
Unit 2: Introduction to Tower Rescue			
Topic 2-1: Introduction to Tower Rescue	0.25	0.0	
Topic 2-2: Standards and Regulations	0.25	0.0	
Unit 2 Totals	**0.50**	**0.0**	**0.50**
Unit 3: Incident Size Up and Planning			
Topic 3-1: Sizing Up a Tower Rescue Incident	0.25	0.25	
Topic 3-2: Recognizing the Need for Technical Rescue Resources	0.25	0.25	
Topic 3-3: Recognizing Incident Hazards and Initiating Isolation Procedures	0.25	0.25	
Topic 3-4: Isolating and Managing Exposure to Potentially Harmful Energy Sources	0.25	0.25	
Topic 3-5: Assessing the Integrity of a Tower Structure	0.25	0.25	
Topic 3-6: Supporting an Operations- or Technician-level Incident	0.25	0.25	
Topic 3-7: Selecting and Using PPE, Tools, and Equipment	0.25	0.25	
Topic 3-8: Utilizing Fall Protection and Positioning Equipment	0.25	0.25	
Topic 3-9: Developing an Incident Action Plan	0.25	0.25	
Unit 3 Totals	**2.25**	**2.25**	**4.50**
Unit 4: Victim Management			
Topic 4-1: Assessing a Victim	0.50	0.25	
Topic 4-2: Removing a Victim from a Tower Environment	0.50	0.25	
Unit 4 Totals	**1.0**	**0.50**	**1.50**
Unit 5: Tower Operations			
Topic 5-1: Performing a Rescue from a Ladder or Elevated Device	0.50	0.0	
Topic 5-2: Participating in an Initial-contact Evaluation	0.50	0.50	
Topic 5-3: Ascending a Tower to Conduct a Rescue	0.50	3.0	
Topic 5-4: Rescuing a Suspended Victim Using a Ground-Based Control System	0.50	3.0	
Topic 5-5: Rescuing a Suspended Victim Using a Tower-Based Control System	0.50	3.0	

Segment	Lecture	Application	Unit Total
Topic 5-6: Rescuing a Victim Using Multiple Control Systems	0.50	3.0	
Topic 5-7: Directing a Tower Rescue Team	0.50	0.50	
Unit 5 Totals	**3.50**	**13.0**	**16.50**
Unit 6: Termination			
Topic 6-1: Terminating an Incident	0.25	0.25	
Unit 6 Totals	**0.25**	**0.25**	**0.50**
Formative Assessments			
Determined by AHJ or educational institution	0.0	0.0	0.0
Summative Assessment			
Determined by AHJ or educational institution	0.0	0.0	0.0
Course Totals	**8.0**	**16.0**	**24.0**

Time Table Key

1. The Time Table documents the amount of time required to deliver the content included in the course plan.

2. Time is documented using the quarter system: 15 min. = .25 / 30 min. = .50 / 45 min. = .75 / 60 min. = 1.0.

3. The Course Totals do not reflect time for lunch (1 hour) or breaks (10 minutes per each 50 minutes of instruction or assessment). It is the instructor's responsibility to add this time based on the course delivery schedule.

4. Application (activities, skills exercises, and formative testing) time will vary depending on the number of students enrolled. The Application time documented is based on the maximum class size identified in the Course Details section.

5. Summative Assessments are determined and scheduled by the authority having jurisdiction. These are not the written or psychomotor State Fire Training certification exams. These are in-class assessments to evaluate student progress and calculate course grades.

Unit 1: Introduction

Topic 1-1: Orientation and Administration

Terminal Learning Objective

At the end of this topic a student will be able to identify facility and classroom requirements and identify course objectives, events, requirements, assignments, activities, skills exercises, resources, evaluation methods, and participation requirements in the course syllabus.

Enabling Learning Objectives

1. Identify facility requirements
    - Restroom locations
    - Food locations
    - Smoking locations
    - Emergency procedures
2. Identify classroom requirements
    - Start and end times
    - Breaks
    - Electronic device policies
    - Special needs and accommodations
    - Other requirements as applicable
3. Review course syllabus
    - Course objectives
    - Calendar of events
    - Course requirements
    - Student evaluation process
    - Assignments
    - Activities
    - Required student resources
    - Class participation requirements

Discussion Questions

1. Determined by instructor

Application

1. Have students complete all required registration forms.

Unit 2: Introduction to Tower Rescue

Topic 2-1: Introduction to Tower Rescue

Terminal Learning Objective

At the end of this topic a student, given towers common to the AHJ, will be able to identify tower rescue incidents common to the AHJ and factors that determine incident complexity so that rescuers are prepared to respond to tower rescue incidents.

Enabling Learning Objectives

1. Identify types of towers
   - Self-supporting
     - Pipe/tubular legs
     - Rod tower legs
     - Angle/lattice tower legs
   - Monopole
     - Slip joint
     - Flanged
     - Concealed antennas
   - Guyed
   - Other/Non-standard
     - Concealed structures (mono-pines, mono-palms, church steeples)
     - Water tanks
     - Roof tops
     - H-frame towers
     - Water/amusement park rides
     - Ski lift/gondolas
     - Cranes
     - Scaffolding
2. Define a “tower rescue” incident
   - Incidents involving victims who have become stranded, trapped, entangled, or pinned in or on various types of towers
3. Identify factors that determine incident complexity
   - Tower type
   - Tower height
   - Tower access
   - Energy sources
   - Number of victims
   - Victim position and condition
   - Risk to victim and rescuers
   - Tools or equipment required
   - Environmental hazards
4. Identify towers common to the AHJ
5. Describe tower components and construction

- Structural components (legs, ladders, pegs, guides, etc.)
- Control components (buttons, switches, sensors, etc.)
- Energy sources
    - Electromagnetic
        - Radiofrequency
        - Microwave
    - Electrical
    - Mechanical
    - Hydraulic
    - Pneumatic

6. Describe hazards associated with operating on and around towers
    - Radiofrequencies
    - Falls
    - Energy sources
    - Structural integrity

Discussion Question

1. What types of towers are common in your AHJ?
2. What factors determine incident complexity for a tower rescue?
3. What hazards are associated with tower rescue?

Application

1. Determined by instructor

Instructor Notes

1. For ELOs that references the AHJ, adjust the course content to reflect AHJ-specific policies, practices, equipment, operations, tactics, etc.

CTS Guide Reference: None

Topic 2-2: Standards and Regulations

Terminal Learning Objective

At the end of this topic a student, given standards, regulations, policies, and procedures, will be able to identify industry, AHJ, and owner/operator requirements, so that tower rescue operations are carried out in accordance with all applicable requirements.

Enabling Learning Objectives

1. Identify industry standards applicable to tower rescue
   - FIRESCOPE ICS 162
   - National Institute of Occupational Safety and Health (NIOSH)
     - Evaluation of Radiofrequency Radiation Exposures at an Atomic Time Radio Station (www.cdc.gov/niosh/hhe/reports/pdfs/2011-0097-3200.pdf)

     National Fire Protection Association (NFPA)
     - 1006: Standard for Technical Rescue Personnel Professional Qualifications
     - 2500: Standard for Operations and Training for Technical Search and Rescue Incidents and Life Safety Rope and Equipment for Emergency Services
   - National Association of Tower Erectors (NATE)
     - Safety Resources
   - American National Standards Institute (ANSI)
     - Z359 (fall protection)
     - Z490 (training)
     - 10.48 (safety practices)
   - Other standards as defined by state and federal law
2. Identify industry regulations applicable to tower rescue
   - Occupational Safety and Health Administration (Fed/OSHA)
     - 1910.140 (fall protection systems)
   - California Division of Occupational Safety and Health (Cal/OSHA)
     - 1670 (fall arrest, fall restraint, positioning devices)
     - 3270 (general access)
     - 3270.1 (use of rope access equipment)
     - 5085 (radiofrequency and microwave radiation)
   - Other regulations as defined by state and federal law
3. Describe how Cal/OSHA 3270.1 applies
   - During training
   - During a rescue event
4. Identify AHJ policies and procedures
   - Determined by AHJ
5. Identify owner/operator policies and procedures
   - Determined by owner/operator

Discussion Question

1. What tower rescue policies and procedures do you have in your AHJ?
2. What other stakeholders might have standards and regulations that impact tower rescue?
3. How do standards and regulations for tower rescue training differ from those used for

tower rescue operations?

Application

1. Determined by instructor

Instructor Notes

1. While training, all operations must adhere to Cal/OSHA rope access standard 3270.1.

CTS Guide Reference: None

Unit 3: Incident Size Up and Planning

Topic 3-1: Sizing Up a Tower Rescue Incident

Terminal Learning Objective

At the end of this topic a student, given background information and applicable reference materials, will be able to size up a tower rescue incident so that the scope of the rescue is determined, the number of victims is identified, the last reported location of all victims is established, witnesses and reporting parties are identified and interviewed, resource needs are assessed, primary search parameters are identified, and information required to develop an initial incident action plan is obtained.

Enabling Learning Objectives

1. Describe components of a tower rescue size up
    - Tower type
    - Tower size
    - Tower use
    - Anticipated hazards
    - Number of victims
    - Victim location
        - Interior vs. exterior
        - Supported vs. unsupported
        - Distance from the ground
    - Victim condition
        - Physical
        - Emotional/psychological
        - Ability to participate in rescue
    - Access and egress points
2. Describe a risk/benefit assessment
    - Rescue vs. recovery
    - Survivability profile
    - Current and forecasted weather
    - Tower condition/stability
3. Describe types of reference materials and their uses
    - Tower preplan
    - AHJ policies and procedures
    - Owner/operator resources
4. Describe availability and capability of resources
5. Describe elements of an incident action plan and related information
6. Describe how size up relates to the incident management system
7. Describe information gathering techniques and how that information is used in the size-up process
    - Pre-incident
    - En route

- On scene
- Evolving

8. Describe basic search criteria for tower rescue incidents
9. Describe how to develop and adhere to contingency plans
    - AHJ policies and procedures
    - Target hazard assessment
    - Primary, alternate, contingency, emergency (PACE) plans
10. Read technical rescue reference materials
11. Gather information
12. Use interview techniques
13. Relay information
14. Use information-gathering sources

Discussion Question

1. What are some ways to gather information for your scene size up?
2. What policies and procedures does your AHJ use to analyze risk vs. benefit?
3. What specialty resources to support tower rescue are available in your AHJ?
4. What are your AHJ's PACE planning policies and procedures?

Application

1. Size up a tower rescue incident
2. Develop and adhere to contingency plans

Instructor Notes

1. None

CTS Guide Reference: CTS 1-2, CTS 2-10

Topic 3-2: Recognizing the Need for Technical Rescue Resources

Terminal Learning Objective

At the end of this topic a student, given AHJ guidelines, will be able to recognize the need for technical rescue resources at an operations- or technical-level incident so that the need for additional resources is identified, the response system is initiated, the scene is secured and rendered safe until additional resources arrive, and awareness-level personnel are incorporated into the operational plan.

Enabling Learning Objectives

1. Describe operational protocols
   - Identify need for additional resources
   - Initiate response system
   - Secure scene and render safe until additional resources arrive
   - Incorporate awareness-level personnel into operational plan
2. Identify specific planning forms
   - Determined by AHJ
3. Describe types of incidents common to the AHJ
4. Describe hazards
5. Describe incident support operations and resources
6. Describe safety measures
7. Apply operational protocols
8. Select specific planning forms based on the types of incidents
9. Identify and evaluate various types of hazards within the AHJ
10. Request support and resources
11. Determine required safety measures

Discussion Question

1. What factors determine when an incident requires additional or specialty resources?
2. What process does your AHJ use to request resources?

Application

1. Recognize the need for technical rescue resources

Instructor Notes

1. None

CTS Guide Reference: CTS 1-4

Topic 3-3: Recognizing Incident Hazards and Initiating Isolation Procedures

Terminal Learning Objective

At the end of this topic a student, given scene control barriers, personal protective equipment (PPE), requisite equipment, and available specialized resources, will be able to recognize incident hazards and initiate isolation procedures so that all hazards are identified; resource application fits the operational requirements; hazard isolation is considered; risks to rescuers, bystanders, and victims are minimized; and rescue time constraints are considered.

Enabling Learning Objectives

1. Describe types and nature of incident risks and hazards
    - Structural integrity
    - Animal interference (snakes, birds, insects)
    - Physical hazards (falls, sharp objects, burns, exhaustion, dehydration, etc.)
    - Psychological hazards (fear, panic, etc.)
    - Falling objects
    - Environmental conditions (wind, heat, cold, etc.)
    - Victim behavior
    - Energy sources
    - Hazardous materials
2. Describe resource capabilities and limitations
3. Describe equipment types and their use
4. Describe isolation terminology, methods, equipment, and implementation
5. Describe operational requirement concerns
6. Describe methods for controlling access to the scene
7. Describe types of technical references
8. Identify resource capabilities and limitations
9. Identify incident hazards
10. Assess potential hazards to rescuers and bystanders
11. Place scene control barriers
12. Operate control and mitigation equipment

Discussion Question

1. What type of risks and hazards can be present at a tower rescue incident?
2. What tools and equipment does your AHJ use to control or mitigate these risks and hazards?

Application

1. Recognize incident hazards and initiate isolation procedures

Instructor Notes

1. None

CTS Guide Reference: CTS 1-3

Topic 3-4: Isolating and Managing Exposure to Potentially Harmful Energy Sources

Terminal Learning Objective

At the end of this topic a student, given lock-out tag-out (LOTO) equipment, construction materials, and PPE, will be able to isolate and manage exposure to potentially harmful energy sources found in erected structures, including power systems such as mechanical, radiofrequency (RF), and electrical hazards, so that all hazards are identified, systems are managed, beneficial system use is evaluated, and hazards to rescue personnel and victims are minimized.

Enabling Learning Objectives

1. Describe types and uses of PPE
2. Describe hazardous energy monitoring and testing equipment
    - Dosimeter
    - Gaussmeter (AC voltage detector, hot stick)
    - Atmospheric monitor
3. Describe types of energy sources
    - Electromagnetic
        - Radiofrequency
        - Microwave
    - Electrical
    - Mechanical
    - Hydraulic
    - Pneumatic
4. Describe system isolation methods
    - Lock-out tag-out
    - Remote-operator/remote-system isolation or shutdown
    - Time
    - Distance
    - Shielding
5. Describe specialized system features
    - Beneficial
        - Elevator
        - Crane
        - Hoistway
6. Describe tools for disabling hazards
    - LOTO kit
7. Describe AHJ policies and procedures
8. Select and use hazard-specific PPE
9. Use energy monitoring and testing equipment
10. Identify hazardous energy sources
11. Operate beneficial systems in support of tactical objectives
    - Elevator

- Crane
- Hoistway

12. Operate tools and devices for securing and disabling hazards
    - LOTO kit
13. Engage in practices that minimize exposure to known or suspected hazards
    - Time
    - Distance
    - Shielding

Discussion Question

1. In your AHJ, are there any hazards that cannot be LOTO and if so, what mitigation factors does your AHJ use?
2. What standards and regulations apply for hazards that cannot be fully shut down?
3. What specialized system features are unique to the towers in your AHJ?

Application

1. Select and use hazard-specific PPE and equipment to isolate and manage exposure to potentially harmful energy sources
2. Minimize exposure to known or suspected hazards

Instructor Notes

1. None

CTS Guide Reference: CTS 2-2

Topic 3-5: Assessing the Integrity of a Tower Structure

Terminal Learning Objective

At the end of this topic a student, given an incident, a pre-climb checklist, and an unobstructed climb path, will be able to assess the integrity of the tower structure and related components so that safe access to the victim is assured, and ensure any integrated safety systems, such as vertical lifelines (e.g., cable or rail-type structure), are accessible.

Enabling Learning Objectives

1. Describe types of structures within area of response
    - Self-supporting
        - Provides strength in compression
        - Provides strength in shear
        - Construction lends to horizontal movement
        - One or more legs may have a ladder
    - Monopole
        - Provides strength in compression
        - No shear strength
        - Limited anchor points
        - Construction lends to interior ladder or exterior climbing pegs
    - Guyed
        - Narrowest and tallest
        - Provides strength in compression
        - Provides shear strength only in locations opposite a guy line
        - Will not have a ladder, must climb on structure
        - Do not use torque arms as attachment points
2. Describe potential structural compromise that would create additional hazards to rescuers
    - Rust and corrosion
    - Warping
    - Cracks
    - Missing components
    - Mechanical malfunctions
3. Perform physical inspection of accessible tower components in accordance with a pre-climb checklist

Discussion Question

1. What type of tower has the least amount of shear strength and how does that impact rescue options?
2. What are some indicators of structural compromise?

Application

1. Perform physical inspection of accessible tower components

Instructor Notes

1. None

CTS Guide Reference: CTS 2-3

Topic 3-6: Supporting an Operations- or Technician-level Incident

Terminal Learning Objective

At the end of this topic a student, given an incident, an assignment, an incident action plan, and resources from the tool cache, will be able to support an operations- or technician-level incident so that the assignment is carried out, progress is reported to command, environmental concerns are managed, personnel rehabilitation is facilitated, and the incident action plan is supported.

Enabling Learning Objectives

1. Describe AHJ operational protocols
2. Describe hazard recognition
   - Radiofrequencies
   - Falls
   - Energy sources
   - Structural integrity
3. Describe incident management
4. Describe PPE selection
5. Describe how to select and use resources
   - Engine company
   - Truck company
   - Rescue company
   - EMS
   - Law enforcement
   - Responsible party
   - Other outside resources
6. Describe scene support requirements
   - Scene control and access
   - Operational zones
   - Liaison with victims, family, bystanders, agency, etc.
   - Logistical support
7. Apply operational protocols
8. Function within the incident management system
9. Follow and implement an incident action plan
10. Report task progress status to a supervisor or incident command

Discussion Question

1. What resources do you have in your AHJ to support tower rescue incident operations?
2. What logistical support operations need to be addressed during a complex tower rescue incident?

Application

1. Support an operations- or technician-level incident

Instructor Notes

1. None

CTS Guide Reference: CTS 1-5

Topic 3-7: Selecting and Using PPE, Tools, and Equipment

Terminal Learning Objective

At the end of this topic a student, given a tower rescue incident and AHJ policies and procedures, will be able to select, operate, and use personal protective equipment (PPE), tools, and equipment so that PPE, tools, and equipment are appropriate to incident response needs, donned and worn correctly, and used in accordance with manufacturer specifications and all applicable policies and procedures.

Enabling Learning Objectives

1. Identify PPE used during tower rescue incidents
    - Helmet
        - Conductivity and RF rated vs. backcountry
    - Head lamp
    - Eye protection
    - Gloves
    - Boots
    - Long sleeve shirt and pants
    - Harness (full body)
    - Radio/comms
2. Identify protections provided by PPE during tower rescue incidents
3. Identify limitations of PPE during tower rescue incidents
4. Identify when and how to don and doff PPE
    - Safety considerations
    - Manufacturer guidelines
    - AHJ policies and procedures
5. Don and doff PPE
6. Describe how to use tower rescue tools and equipment
    - Rope and rigging
        - Hardware
            - Carabiners
            - Pulleys
            - Descent control devices
        - Software
            - Rope
            - Webbing
            - Drop bags
    - Harnesses
        - Attachment points
            - Dorsal
            - Chest
            - Pelvic
            - Positioning
        - Size/fit
    - Climbing and positioning

        - Ascenders
        - Bypass lanyards (Y or V)
        - Work positioning straps
            - Commercial
            - Improvised
        - Self-belaying device (e.g., ASAP®, quantum, etc.)
        - Shock absorbers (e.g., ASAP'Sorber, etc.)
        - Pipe and cable grabs
    - Lead climbing
        - Dynamic rope and appropriate belay device
        - Quick draws
    - Anchoring
        - Shepherd's hook
        - Anchor straps
        - Wire rope chokers or slings
    - Specialty equipment
        - Mini mechanical advantage (haul) system
        - Radiofrequency dosimeter
        - Reach pole (e.g., CMC Rescue SureClip, Yates Super Clip, etc.)
    - Victim Rescue
        - Disentanglement
        - Stabilization
        - Packaging
        - Removal
7. Identify guidelines for cleaning, inspecting, and maintaining tools and equipment
    - Manufacturer guidelines
    - AHJ guidelines
    - NFPA 2500
    - Documentation and reporting requirements
8. Describe methods for cleaning tools and equipment
9. Identify when and how to remove tools and equipment from service
    - Manufacturer guidelines
    - AHJ guidelines
    - Documentation and reporting requirements
10. Select, use, and maintain tools and equipment

Discussion Question

1. What types of PPE does your AHJ have available for tower rescue operations?
2. What equipment does your agency use for tower rescue?
3. What are the maintenance procedures for these tools and equipment?

Application

1. Don and doff PPE
2. Select, use, and maintain tools and equipment

Instructor Notes

1. ELO 6 – Use the course equipment list as the minimum requirements and then include any other tools and equipment common to your AHJ.

CTS Guide Reference: CTS 2-12

Topic 3-8: Utilizing Fall Protection and Positioning Equipment

Terminal Learning Objective

At the end of this topic a student, given a specific tower structure, will be able to recognize, identify, and utilize typical fall protection and work positioning equipment used by climbers so that the victim can be transferred to the rescue system.

Enabling Learning Objectives

1. Describe how to review a tower rescue preplan to gain familiarity with tower climber safety and work positioning equipment
   - Rescue
   - Industry
2. Describe fall factor and its effects on anchors, equipment, and people
3. Define fall arrest
4. Define fall arrest attachments
5. Define fall restraint
6. Define fall restraint attachments
7. Define work positioning device systems
8. Define travel restraint
9. Describe fall protection devices and their applications
   - Y-lanyard vs. V-lanyard
   - Lanyard (adjustable and appropriate length)
   - Adjustable positioning lanyard
   - Self-retracting lanyard (SRL)
   - Energy absorber with lock (e.g., ASAP'SORBER)
   - Pipe grab
   - Cable/rope grab
   - Others
10. Operate tower fall protection and work positioning equipment

Discussion Question

1. What are the similarities and differences between fall arrest, fall restraint, and travel restriction equipment?
2. What equipment does your AHJ use for fall protection?
3. What are some methods to reduce impact force while using fall protection equipment?

Application

1. Operate tower fall protection and work positioning equipment

Instructor Notes

1. Use Cal/OSHA 1670 to define the terms in ELOs 3, 4, 5, 6, and 7.
2. Use Fed/OSHA 1910.140 to define the term in ELO 8.
3. All equipment must be used in accordance with manufacturer's recommendations and Cal/OSHA's regulations.
4. Ensure that students are clear on the attachment points for equipment used during fall arrest and fall restraint.

CTS Guide Reference: CTS 2-4

Topic 3-9: Developing an Incident Action Plan

Terminal Learning Objective

At the end of this topic a student, given a tower rescue scenario, will be able to develop an incident action plan (IAP) for a tower rescue incident so that hazardous energy sources are identified and managed, fall protection is maintained throughout the event, anchor points are identified and utilized to best advantage, and the IAP objectives are met.

Enabling Learning Objectives

1. Describe the components of an IAP
   - Communications Plan
   - Safety Plan
   - Operations Plan
     - PACE (primary, alternate, contingency, emergency)
   - Medical Plan
2. Describe considerations that help develop an IAP
   - AHJ policies and procedures
   - Size up and assessment
   - Number of victims
   - Climbing plan elements
   - Data gathering and collection methods
   - Anchor point identification and construction methods
   - Hazardous energy source recognition, identification, and control methods
   - Ascent and descent techniques
   - Fall protection methods
3. Describe how to combine multiple actions and information sources into a cohesive plan
   - Formal vs. informal
   - AHJ tactical worksheet
4. Use a tactical worksheet

Discussion Question

1. What does your AHJ include in a technical rescue IAP?
2. Who is responsible for developing the IAP?
3. When does an incident require a formal IAP?

Application

1. Develop an IAP
   - For a tower rescue incident on a structure whose size, shape, or configuration would accommodate only one rescuer (required)
   - Other scenarios as determined by instructor applicable to the AHJ service area (optional)

Instructor Notes

1. None

CTS Guide Reference: CTS 3-2

Unit 4: Victim Management

Topic 4-1: Assessing a Victim

Terminal Learning Objective

At the end of this topic a student, given an incident, will be able to assess a victim in a tower environment according to the rescue preplan so that the risks from a fall are minimized or eliminated, the patient is accessed, and the objective is achieved.

Enabling Learning Objectives

1. Describe how to establish victim rapport
2. Identify victim assessment considerations
    - Mental status
        - Compliant
        - Combative
        - Unresponsive
    - Time constraints
        - How long has the victim been there?
        - How much longer can the victim remain there?
        - Suspension syndrome
    - Falls
        - Mechanism
    - Equipment
        - What does the victim have?
        - Is it accessible and usable for rescue?
    - Injury status
3. Assess a victim (implement tactics and employ tools identified in preplan to achieve objective)

Discussion Question

1. How does fall factor impact the mechanism of injury?
2. What protocols does your local EMSA have for suspension trauma?
3. What type of victims present the most risk to rescuers?
4. Who has authority over an uncooperative victim in your AHJ?

Application

1. Assess a victim

Instructor Notes

1. None

CTS Guide Reference: CTS 2-7

Topic 4-2: Removing a Victim from a Tower Environment

Terminal Learning Objective

At the end of this topic a student, given an incident, will be able to remove a victim from a tower environment so that risks to victims and rescuers are minimized, all the elements of the preplan are complied with, and the objective is achieved.

Enabling Learning Objectives

1. Describe how to secure a victim to prevent falling
    - Victim wearing their own harness
        - Secured
        - Unsecured
    - Victim not wearing a harness
2. Describe how to package a victim
    - Select packaging based on mechanism of injury and rescue priority
3. Describe when and how to use packaging equipment
        - Harness
        - Litters
4. Describe how to connect a packaged victim to control lines
5. Describe how to move victim to desired location
    - Ground-controlled system
    - Tower-controlled system
    - Other method
6. Employ tactics identified in rescue preplan for removal of a victim on a tower

Discussion Question

1. What victim packaging equipment does your AHJ use for tower rescue?
2. What complications might you experience when packaging a victim?

Application

1. Package a victim in a harness
2. Secure a harnessed victim to a tower
3. Package a victim in a litter
4. Package a victim in a tower at elevation
5. Connect a packaged victim to control lines
6. Move a victim vertically on a ground-controlled system
7. Move a victim horizontally on a ground-controlled system
8. Move a victim vertically on tower-controlled system
9. Move a victim horizontally on a tower-controlled system

Instructor Notes

1. None

CTS Guide Reference: CTS 2-8

Unit 5: Tower Operations

Topic 5-1: Performing a Rescue from a Ladder or Elevated Device

Terminal Learning Objective

At the end of this topic a student, given an incident not requiring the rescuer to be solely supported by the tower, will be able to rescue a person from a tower while working from ground ladders, aerial ladders, or other elevated devices employed by the AHJ so that the patient is transferred from the tower to the elevated device, the agency's protocol for the use of the device is followed, and the risks to the victim and rescuer are minimized.

Enabling Learning Objectives

1. Describe how to use ladders or elevated devices for tower rescue
2. Describe specific procedures for using ladders or elevated devices in victim transfer from a tower
   - Ground ladder
   - Elevated devices
3. Work from or operate ladders or elevated devices capable of accessing and rescuing the tower victim and transferring from the tower to the elevated device while providing fall protection for the victim and rescue personnel

Discussion Question

1. What kind of elevated devices are available in your AHJ?
2. What policies and procedures do you have in your AHJ for rescuing off a ground ladder or elevated device?
3. What does your agency use for fall protection for a victim on a ladder?

Application

1. Work from or operate ladders capable of accessing and rescuing a tower victim (optional/recommended)
2. Work from or operate elevated devices capable of accessing and rescuing a tower victim (optional/recommended)
3. Transfer a victim from a tower to ladder (optional/recommended)
4. Transfer a victim from a tower to an elevated device while providing fall protection for the victim and rescue personnel (optional/recommended)

Instructor Notes

1. The application activities for this topic are optional based on student skill level.

CTS Guide Reference: CTS 1-1

Topic 5-2: Participating in an Initial-contact Evaluation

Terminal Learning Objective

At the end of this topic a student, given a tower rescue preplan, the specific tower targeted in the preplan, an operations-level tower rescue tool cache, and a tower rescue team, will be able to participate in an initial-contact evaluation so that the targeted elevation in the tower is attained using the tools and techniques designated for use during a rescue operation, all elements of the rescue plan are implemented, and the full scope of the plan is exercised.

Enabling Learning Objectives

1. Describe the purpose of an initial-contact evaluation
    - Confirm or reevaluate the rescue plan after gaining access to victim
2. Describe the components of an initial-contact evaluation
    - Evaluate tower preplan
        - Is it safe?
        - Does it accomplish the task?
        - Is it the most efficient way?
    - Identify appropriate tools and equipment from the tool cache
    - Identify applicable AHJ policies and procedures for tower rescue operations
    - Climb tower to the designated height
    - Assess victim location and position
    - Secure or stabilize victim
    - Confirm or reevaluate rescue plan
3. Select and transport designated tools

Discussion Question

1. What minimum equipment would you take with you to perform this initial-contact evaluation?
2. What issues could come up during your initial-contact evaluation (e.g., victim is not secure, animal hazards, etc.)?
3. What is the purpose of an initial-contact evaluation?

Application

1. Conduct an initial-contact evaluation

Instructor Notes

1. None

CTS Guide Reference: CTS 2-1

Topic 5-3: Ascending a Tower to Conduct a Rescue

Terminal Learning Objective

At the end of this topic a student, given an incident action plan and a pre-climb checklist, will be able to ascend a tower to conduct a rescue so that the pre-climb checklist and hazard control measures are implemented; fall protection systems are utilized; and the rescuer moves both horizontally and vertically between structural elements of the tower, with or without the benefit of climbing pegs, ladders, or vertical lifelines, to achieve the objectives of the incident action plan.

Enabling Learning Objectives

1. Describe a pre-climb checklist
2. Describe system safety check protocols
3. Describe the application and limitations of climbing, positioning, and fall protection systems
4. Describe how to use fall protection equipment
    - 100% tie off equipment systems
        - Bypass lanyards
    - Vertical lifeline equipment systems
        - Belay
        - Cable/rope grabs
        - Pipe grabs
5. Describe how to ascend a tower vertically
    - Ladders
    - Pegs
    - Lattice
6. Describe how to descend a tower
    - Ladders
    - Pegs
    - Lattice
7. Describe how to transfer between integrated vertical lifeline systems
    - Engagement and disengagement procedures from vertical lifeline cable or rope grabs
    - Use bypass and work positioning lanyards
8. Describe how to traverse a tower horizontally
9. Describe how to place and use work positioning equipment
10. Determine proper PPE, tools, and equipment given the type of tower structure and integrated temporary or permanent safety systems
11. Don appropriate PPE, including but not limited to fall protection, helmet, and gloves as appropriate
12. Perform system safety checks
13. Use 100% tie off or vertical lifeline equipment systems to ascend the tower structure
14. Transfer between integrated vertical lifeline systems
15. Traverse a tower horizontally using a 100% tie off fall protection system

16. Use positioning equipment to support the weight of the rescuer permitting the rescuer to perform a task
17. Describe climbing plan
18. Perform climbing techniques and methods

Discussion Question

1. What climbing aids does your AHJ use?
2. What are some methods to reduce impact force during protected climbing?

Application

1. Ascend a tower to the level of the victim using a 100% tie off or vertical lifeline fall protection system
2. Ascend a tower using a ladder, pegs, or lattice
3. Transfer between integrated vertical lifeline systems (including a self-safety check)
4. Traverse a tower horizontally using a 100% tie off fall protection system
5. Place and use work positioning equipment permitting the rescuer to perform a task
6. Descend a tower

Instructor Notes

1. Application 1: The instructors must demonstrate both systems (100% tie off or vertical lifeline) to ascend the tower structure. The student must demonstrate one system, determined by instructor.
2. Application 2: The instructor must demonstrate how to ascend using all three methods (ladders, pegs, lattice). The student must demonstrate one method, determined by instructor based on available training tower/structure.

CTS Guide Reference: CTS 2-5, CTS 2-6, CTS 3-3

Topic 5-4: Rescuing a Suspended Victim Using a Ground-Based Control System

Terminal Learning Objective

At the end of this topic a student, given an incident action plan, climbing plan, hazard-specific PPE, and resources from the tower rescue tool cache, will be able to perform a ground-based tower rescue of a suspended victim from an elevated position so that the victim is released/transferred from an existing fall arrest system to one created by the rescuer, and the victim is moved both horizontally and vertically a distance representative of the rescue environment.

Enabling Learning Objectives

1. Identify when to use a ground-based system that can accommodate vertical and horizontal movement
   - Benefits
   - Limitations
2. Describe the tools and equipment used for a ground-based tower rescue
   - To build the system
   - Carried by the rescuer
3. Describe how to establish anchors
   - On the ground
   - On the tower
4. Describe how to construct a control line system that accounts for vertical and horizontal movement
   - On the ground
   - On the tower
5. Describe how to transfer a victim from an existing fall arrest system to a control line system
6. Describe how to move a victim vertically and horizontally
7. Describe safety considerations associated with ground-based control systems
8. Construct a control line system that accounts for vertical and horizontal movement
9. Transfer a victim from an existing fall arrest system to a control line system
10. Move a victim vertically and horizontally

Discussion Question

1. When would you use a ground-based control system to rescue a victim?
2. What tools and equipment does the rescuer need to take up with them to construct and use a ground-based control system?
3. Who performs the safety check for a ground-based rescue system?

Application

1. Construct a ground-based control system that can accommodate vertical and horizontal movement
2. Transfer a victim from an existing fall arrest system to a ground-based control system
3. Operate a ground-based control system to move a victim vertically and horizontally

Instructor Notes

1. None

CTS Guide Reference: CTS 3-4

Topic 5-5: Rescuing a Suspended Victim Using a Tower-Based Control System

Terminal Learning Objective

At the end of this topic a student, given an incident action plan, climbing plan, hazard-specific PPE, and resources from the tower rescue tool cache, will be able to rescue a victim suspended from a tower at a height beyond the scope of a ground-based rope rescue system so that the victim is transferred to the rescue system and is moved both horizontally and vertically a distance representative of the rescue environment.

Enabling Learning Objectives

1. Identify when to use a tower-based system that can accommodate vertical and horizontal movement
   - Benefits
   - Limitations
2. Describe the tools and equipment used for a tower-based tower rescue
   - To build the system
   - Carried by the rescuer
3. Describe how to establish anchors
   - On the tower
   - On the ground (as needed)
4. Describe how to construct a control line system that accounts for vertical and horizontal movement
   - On the tower
   - On the ground (as needed)
5. Describe how to transfer a victim from an existing fall arrest system to a control line system
6. Describe how to move a victim vertically and horizontally
7. Describe safety considerations associated with tower-based control systems
8. Construct a control line system that accounts for vertical and horizontal movement
9. Transfer a victim from an existing fall arrest system to a control line system
10. Move a victim vertically and horizontally

Discussion Question

1. When would you use a tower-based control system to rescue a victim?
2. What tools and equipment does the rescuer need to take up with them to construct and use a tower-based control system?
3. Who performs the safety check for a tower-based rescue system?
4. How is transferring a victim from an existing fall arrest system to a control line system different on a tower-based system than on a ground-based system?

Application

1. Construct a tower-based control system that can accommodate vertical and horizontal movement
2. Transfer a victim from an existing fall arrest system to a tower-based control system
3. Operate a tower-based control system to move a victim vertically and horizontally

Instructor Notes

1. None

CTS Guide Reference: CTS 3-5

Topic 5-6: Rescuing a Victim Using Multiple Control Systems

Terminal Learning Objective

At the end of this topic a student, given a tower rescue scenario and a tower rescue tool cache, will be able to rescue a victim from a tower or elevated structure where the travel path or height of the objective requires multiple sets of sequential rope systems so that the victim is protected from a fall, rope movement is managed without entanglement, and the objective is achieved.

Enabling Learning Objectives

1. Identify when and where to use multiple control systems
   - Benefits
   - Limitations
2. Describe the tools and equipment used for multiple control systems
   - To build the system
   - Carried by the rescuer
3. Describe how to establish anchors
   - On the tower
   - On the ground (as needed)
4. Describe how to construct multiple control systems that account for vertical and/or horizontal movement
   - On the tower
   - On the ground (as needed)
5. Describe how to transfer a victim from one control system to another control system
6. Describe how to move a victim vertically and/or horizontally
7. Describe safety considerations associated with multiple control systems
8. Construct multiple control systems that account for vertical and/or horizontal movement
9. Transfer a victim from one control system to another control system
10. Move a victim vertically and/or horizontally

Discussion Question

1. What are the advantages to building the control systems concurrently?
2. What circumstances might prevent you from building concurrent control systems?
3. What tower configurations might require multiple control systems?
4. What other circumstances might require multiple control systems?
5. How does the added complexity of a multiple control system impact safety needs?

Application

1. Construct multiple control line systems that can accommodate vertical and/or horizontal movement
2. Transfer a victim from one control system to another control system
3. Operate multiple control systems to move a victim vertically and/or horizontally

Instructor Notes

1. None

CTS Guide Reference: CTS 3-6

Topic 5-7: Directing a Tower Rescue Team

Terminal Learning Objective

At the end of this topic a student, given an incident, a rescue preplan, resources from the tower rescue tool cache, and a prescribed means of removal of the victim to the objective, will be able to direct a team in removal of a victim from a preplanned tower environment so that resources are deployed to best advantage, risks to victims and rescuers are minimized, all the elements of the preplan are complied with, and the objective is achieved.

Enabling Learning Objectives

1. Describe how to direct a tower rescue team
   - Interpret and apply AHJ policies and protocols
   - Initiate and operate within the IMS (if applicable)
   - Interpret and apply pre-incident planning data
   - Maintain continuous situational awareness and risk management practices
   - Implement site safety and hazard control techniques
   - Implement tactics identified in the rescue preplan for the removal of a victim on a tower
2. Direct the employment of tactics identified in the rescue preplan to remove a victim on a tower

Discussion Question

1. Who directs the tower rescue team in your AHJ?
2. What determines the risk management practices in your AHJ?
3. What qualifications or training does your AHJ require to participate in a tower rescue?

Application

1. Direct a tower rescue team to remove a victim from a tower

Instructor Notes

1. None

CTS Guide Reference: CTS 2-9, CTS 3-1

Unit 6: Termination

Topic 6-1: Terminating an Incident

Terminal Learning Objective

At the end of this topic a student, given PPE specific to the incident, isolation barriers, and a tool cache, will be able to terminate an incident so that rescuers and bystanders are protected and accounted for during termination operations, the party responsible is notified of any modification or damage created during the operational period, documentation of loss or materials use is accounted for, scene documentation is performed, scene control is transferred to a responsible party, potential or existing hazards are communicated to that responsible party, debriefing and post-incident analysis and critique are considered, and command is terminated.

Enabling Learning Objectives

1. Describe PPE characteristics
   - PPE requirements change in IDLH vs non-IDLH
   - Decontamination, maintenance, and repair requirements
2. Identify hazard and risk identification
   - Reevaluate mitigated and ongoing hazards
   - Resources in transition
   - Complacency
   - Normalized deviance
   - Fatigue
3. Describe equipment removal procedures
   - When to leave in place
   - Systematic breakdown and removal
4. Describe isolation techniques
5. Identify statutory requirements
   - Determined by AHJ
6. Identify responsible parties
7. Describe accountability system use
   - PAR – personnel accountability report
8. Describe documentation and reporting requirements
   - Determined by AHJ
9. Describe post-incident analysis techniques
   - Determined by AHJ
   - Critical incident stress debriefing
10. Select and use hazard-specific PPE
11. Decontaminate PPE
12. Use barrier protection techniques
13. Implement data collection and record-keeping/reporting protocols
14. Conduct post-incident analysis activities

Discussion Question

1. What hazards and risks can arise during incident termination?
2. Who are some examples of responsible parties that may assume responsibility for the scene when the incident terminates?
3. What critical incident stress management resources are available to you?

Application

1. Terminate an incident

Instructor Notes

1. None

CTS Guide Reference: CTS 2-11

Drill Ground Activities and Evolutions

The following components must be covered in the drill ground activities and/or evolutions but can be combined and completed in the order that best suites the props available and AHJ policies and procedures.

Students will conduct skills with an asterisk (*) individually. All other skills may be carried out as part of a rescue team.

Drill ground activities must incorporate the following learning objectives:

- Size up a tower rescue incident
- Develop and adhere to contingency plans
- Recognize the need for technical rescue resources
- Recognize incident hazards and initiate isolation procedures
- Select and use hazard-specific PPE and equipment to isolate and manage exposure to potentially harmful energy sources
- Minimize exposure to known or suspected hazards
- Perform physical inspection of accessible tower components
- Support an operations- or technician-level incident
- Don and doff PPE*
- Select, use, and maintain tools and equipment*
- Operate tower fall protection and work positioning equipment*
- Develop an incident action plan
    - For a tower rescue incident on a structure whose size, shape, or configuration would accommodate only one rescuer (required)
    - Other scenarios as determined by instructor applicable to the AHJ service area (optional)
- Terminate an incident

Drill ground activities must address the following operations:

- Ascension and descension
    - Ascend a tower to the level of the victim using a 100% tie off or vertical lifeline fall protection system*
    - Ascend a tower using a ladder, pegs, or lattice*
    - Conduct an initial-contact evaluation
    - Descend a tower*
- Transfer and Traverse
    - Transfer between integrated vertical lifeline systems (including a self-safety check)*
    - Traverse a tower horizontally using a 100% tie off fall protection system*
- Work positioning equipment
    - Place and use work positioning equipment permitting the rescuer to perform a task*

- Victim Management
    - Assess a victim
    - Package a victim
        - In a harness*
        - In a litter*
        - In a tower at elevation
    - Secure a harnessed victim to a tower*
    - Connect a packaged victim to control lines
    - Move a victim vertically
        - On a ground-controlled system
        - On tower-controlled system
    - Move a victim horizontally
        - On a ground-controlled system
        - On a tower-controlled system
    - Transfer a victim
        - From a tower to ladder (optional/recommended)
        - From a tower to an elevated device while providing fall protection for the victim and rescue personnel (optional/recommended)
        - From one control system to another control system
    - Transfer a suspended victim
        - From an existing fall arrest system to a ground-based control system
        - From an existing fall arrest system to a tower-based control system
- Direction
    - Direct a tower rescue team to remove a victim from a tower

Drill ground activities must incorporate the following rescue scenarios:

- Ladder or elevated device
    - Work from or operate ladders capable of accessing and rescuing a tower victim (optional/recommended)
    - Work from or operate elevated devices capable of accessing and rescuing a tower victim (optional/recommended)
- Ground-based control system
    - Construct a ground-based control system that can accommodate vertical and horizontal movement
    - Operate a ground-based control system to move a victim vertically and horizontally
- Tower-based control system
    - Construct a tower-based control system that can accommodate vertical and horizontal movement
    - Operate a tower-based control system to move a victim vertically and horizontally

- Multiple control systems
    - Construct multiple control line systems that can accommodate vertical and/or horizontal movement
    - Operate multiple control systems to move a victim vertically and/or horizontally

How to Read a Course Plan

A course plan identifies the details, logistics, resources, and training and education content for an individual course. Whenever possible, course content is directly tied to a national or state standard. SFT uses the course plan as the training and education standard for an individual course. Individuals at fire agencies, academies, and community colleges use course plans to obtain their institution's consent to offer course and provide credit for their completion. Instructors use course plans to develop syllabi and lesson plans for course delivery.

Course Details
The Course Details segment identifies the logistical information required for planning, scheduling, and delivering a course.

Required Resources
The Required Resources segment identifies the resources, equipment, facilities, and personnel required to deliver the course.

Unit
Each Unit represents a collection of aligned topics. Unit 1 is the same for all SFT courses. An instructor is not required to repeat Unit 1 when teaching multiple courses within a single instructional period or academy.

Topics
Each Topic documents a single Terminal Learning Objective and the instructional activities that support it.

Terminal Learning Objective
A Terminal Learning Objective (TLO) states the instructor's expectations of student performance at the end of a specific lesson or unit. Each TLO includes a task (what the student must be able to do), a condition (the setting and supplies needed), and a standard (how well or to whose specifications the task must be performed). TLOs target the performance required when students are evaluated, not what they will do as part of the course.

Enabling Learning Objectives
The Enabling Learning Objectives (ELO) specify a detailed sequence of student activities that make up the instructional content of a lesson plan. ELOs cover the cognitive, affective, and psychomotor skills students must master to complete the TLO.

Discussion Questions
The Discussion Questions are designed to guide students into a topic or to enhance their understanding of a topic. Instructors may add to or adjust the questions to suit their students.

Application
The Application segment documents experiences that enable students to apply lecture content through cognitive and psychomotor activities, skills exercises, and formative testing. Application experiences included in the course plan are required. Instructors may add additional application experiences to suit their student population if time permits.

Instructor Notes
The Instructor Notes segment documents suggestions and resources to enhance an instructor's ability to teach a specific topic.

CTS Guide Reference
The CTS Guide Reference segment documents the standard(s) from the corresponding Certification Training Standard Guide upon which each topic within the course is based. This segment is eliminated if the course is not based on a standard.

Skill Sheet
The Skill Sheet segment documents the skill sheet that tests the content contained within the topic. This segment is eliminated if the course does not have skill sheets.

Tower Rescue Technician (2021)
Training Record

Name: _____

SFT ID Number: _____

Students will conduct skills with an asterisk (*) individually. All other skills may be carried out as part of a rescue team.

	Skill	Course Plan Topic	Evaluator Initials
1.	Size up a tower rescue incident	3-1	
2.	Develop and adhere to contingency plans	3-1	
3.	Recognize the need for technical rescue resources	3-2	
4.	Recognize incident hazards and initiate isolation procedures	3-3	
5.	Select and use hazard-specific PPE and equipment to isolate and manage exposure to potentially harmful energy sources	3-4	
6.	Minimize exposure to known or suspected hazards	3-4	
7.	Perform physical inspection of accessible tower components	3-5	
8.	Support an operations- or technician-level incident	3-6	
9.	Don and doff PPE*	3-7	
10.	Select, use, and maintain tools and equipment*	3-7	
11.	Operate tower fall protection and work positioning equipment*	3-8	
12.	Develop an incident action plan for a tower rescue incident on a structure whose size, shape, or configuration would accommodate only one rescuer	3-9	
13.	Assess a victim	4-1	
14.	Package a victim in a harness*	4-2	
15.	Package a victim in a litter*	4-2	
16.	Package a victim in a tower at elevation*	4-2	
17.	Secure a harnessed victim to a tower*	4-2	
18.	Connect a packaged victim to control lines	4-2	
19.	Move a victim vertically on a ground-controlled system	4-2	

20.	Move a victim horizontally on a ground-controlled system	4-2	
21.	Move a victim vertically on a tower-controlled system	4-2	
22.	Move a victim horizontally on a tower-controlled system	4-2	
23.	Work from or operate ladders capable of accessing and rescuing a tower victim (optional)	5-1	
24.	Work from or operate elevated devices capable of accessing and rescuing a tower victim (optional)	5-1	
25.	Transfer a victim from a tower to ladder (optional)	5-1	
26.	Transfer a victim from a tower to an elevated device while providing fall protection for the victim and rescue personnel (optional)	5-1	
27.	Conduct an initial-contact evaluation	5-2	
28.	Ascend a tower to the level of the victim using a 100% tie off or vertical lifeline fall protection system*	5-3	
29.	Ascend a tower using a ladder, pegs, or lattice*	5-3	
30.	Transfer between integrated vertical lifeline systems (including a self-safety check)*	5-3	
31.	Traverse a tower horizontally using a 100% tie off fall protection system*	5-3	
32.	Place and use work positioning equipment permitting the rescuer to perform a task*	5-3	
33.	Descend a tower*	5-3	
34.	Construct a ground-based control system that can accommodate vertical and horizontal movement	5-4	
35.	Transfer a suspended victim from an existing fall arrest system to a ground-based control system	5-4	
36.	Operate a ground-based control system to move a victim vertically and horizontally	5-4	
37.	Construct a tower-based control system that can accommodate vertical and horizontal movement	5-5	
38.	Transfer a victim from an existing fall arrest system to a tower-based control system	5-5	
39.	Operate a tower-based control system to move a victim vertically and horizontally	5-5	
40.	Construct multiple control line systems that can accommodate vertical and/or horizontal movement	5-6	
41.	Transfer a victim from one control system to another control system	5-6	
42.	Operate multiple control systems to move a victim vertically and/or horizontally	5-6	

43.	Direct a tower rescue team to remove a victim from a tower	5-7	
44.	Terminate an incident	6-1	

A candidate has successfully completed the skill when they perform it to the corresponding Terminal Learning Objective standard found in State Fire Training's Tower Rescue Technician course.

SFT Course ID: _____

Course Delivery Date: _____

Instructor of Record: _____

Instructor SFT ID Number: _____

Tower Rescue Technician

(NFPA 1006: Tower Rescue, Awareness/Operations/Technician)

Instructor Task Book (2021)

California Department of Forestry and Fire Protection
Office of the State Fire Marshal
State Fire Training

Overview

Authority

This instructor task book includes the training standards set forth in:

- NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)

Published: Month Year

Published by: State Fire Training, PO Box 944246, Sacramento, CA 94244-2460

Cover photo courtesy of Matt O'Donnell, Battalion Chief, Ebbetts Pass Fire District.

Purpose

The State Fire Training instructor task book is a performance-based document. It lists the minimum requirements a candidate must meet to teach a specific State Fire Training course or course series.

Assumptions

Except for Fire Fighter and Emergency Vehicle Technician (EVT) certifications, a candidate may begin the task book initiation process upon completion of all required education components (courses).

Each job performance requirement (JPR) shall be evaluated after the candidate initiates the task book.

State Fire Training task books do not count towards the NWCG task book limit. There is no limit to the number of State Fire Training task books a candidate may pursue at one time if the candidate meets the initiation requirements for each.

It is the candidate's responsibility to routinely check the State Fire Training website for updates to an initiated task book. All State Fire Training issued updates to an initiated task book are required for task book completion.

A candidate must complete a task book within three years of its initiation date. Otherwise, a candidate must initiate a new task book using the curriculum's current published version.

Roles and Responsibilities

Candidate

The candidate is the individual pursuing instructor registration.

Initiation

The candidate shall:

1. Complete the Initiation Requirements section.
   - Please print.
2. Complete a block on the Signature Verification page with a handwritten signature.

Completion

The candidate shall:

1. Complete all Job Performance Requirements.
   - Ensure that an evaluator initials, signs, and dates each task to verify completion.
2. Complete the Completion Requirements section.
3. Sign and date the Candidate verification section on the Review and Approval page with a handwritten signature.
4. Obtain their fire chief's handwritten (not stamped) signature on the Fire Chief verification section on the Review and Approval page.
5. Create and retain a physical or high-resolution digital copy of the completed task book.

Submission

The candidate shall:

1. Submit a copy (physical or digital) of the completed task book and any supporting documentation to State Fire Training.
   - See Submission and Review below.

A candidate should not submit a task book until they have completed all requirements and obtained all signatures. State Fire Training will reject and return an incomplete task book.

Evaluator

An evaluator is any individual who verifies that the candidate can satisfactorily execute a job performance requirement (JPR).

A qualified evaluator is a Registered Tower Rescue Technician Instructor designated by the candidate's fire chief (or authorized designee). For instructor task books that do not require fire chief initiation, academy instructors serve as or designate evaluators.

All evaluators shall:

1. Complete a block on the Signature Verification page with a handwritten signature.
2. Review and understand the candidate's instructor task book requirements and responsibilities.
3. Verify the candidate's successful completion of one or more job performance requirements through observation.
    - Do not evaluate any job performance requirement (JPR) until after the candidate initiates the task book.
    - Sign all appropriate lines in the instructor task book with a handwritten signature or approved digital signature (e.g., DocuSign or Adobe Sign; a scanned copy of a signature is not acceptable) to record demonstrated performance of tasks.

Fire Chief

The fire chief is the individual who initiates (when applicable) and then reviews and confirms the completion of a candidate's instructor task book.

A fire chief may identify an authorized designee already on file with State Fire Training to fulfill any task book responsibilities assigned to the fire chief. (See *State Fire Training Procedures Manual*, 4.2.2: Authorized Signatories)

Initiation

The fire chief shall:

1. Review and understand the candidate's instructor task book requirements and responsibilities.
2. Complete a block on the Signature Verification page with a handwritten signature.
3. Designate qualified evaluators.

Completion

The fire chief shall:

1. Confirm that the candidate has obtained the appropriate signatures to verify successful completion of each job performance requirement.
    - Ensure that all job performance requirements were evaluated after the initiation date.

2. Confirm that the candidate meets the Completion Requirements.
3. Sign and date the Fire Chief verification statement under Review and Approval with a handwritten signature.
    - If signing as an authorized designee, verify that your signature is on file with State Fire Training.

Submission and Review

A candidate should not submit a task book until they have completed all requirements and obtained all signatures. State Fire Training will reject and return an incomplete task book.

To submit a completed task book, please send the following items to the address below:

1. A copy of the completed task book (candidate may retain the original)
2. All supporting documentation
3. Payment

State Fire Training
Attn: Instructor Registration
PO Box 944246
Sacramento, CA 94244-2460

State Fire Training reviews all submitted task books.

- If the task book is complete, State Fire Training will authorize the task book and retain a digital copy of the authorized task book in the candidate's career file.
- If the task book is incomplete, State Fire Training will return the task book with a notification indicating what needs to be completed prior to resubmission.

Completion of this instructor task book is one step in the instructor registration process. Please refer to the *State Fire Training Procedures Manual* for the complete list of qualifications required to teach Tower Rescue Technician (2021).

Initiation Requirements

The following requirements must be completed prior to initiating this task book.

Candidate Information

Name: _____

SFT ID Number: _____

Fire Agency: _____

Initiation Date: _____

Prerequisites

The candidate meets one of the following prerequisites.

1. OSFM Instructor 1, Training Instructor I, or Fire Instructor I certification
2. OSFM Registered Instructor

Include documentation to verify prerequisite requirements when you submit your instructor task book unless verification is already documented in your SFT User Portal.

Education

The candidate has completed the following courses.

1. Tower Rescue Technician (SFT)

Include documentation to verify education requirements when you submit your instructor task book unless verification is already documented in your SFT User Portal.

Fire Chief Approval

State Fire Training confirms that a fire chief's approval is not required to initiate this task book.

Signature Verification

The following individuals have the authority to verify portions of this instructor task book using the signature recorded below.

Please print except for the Signature line where a handwritten signature is required.
Add additional signature pages as needed.

Name: ______________________ **Name:** ______________________
Job Title: ______________________ Job Title: ______________________
Organization: ______________________ Organization: ______________________
Signature: ______________________ Signature: ______________________

Name: ______________________ **Name:** ______________________
Job Title: ______________________ Job Title: ______________________
Organization: ______________________ Organization: ______________________
Signature: ______________________ Signature: ______________________

Name: ______________________ **Name:** ______________________
Job Title: ______________________ Job Title: ______________________
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Name: ______________________ **Name:** ______________________
Job Title: ______________________ Job Title: ______________________
Organization: ______________________ Organization: ______________________
Signature: ______________________ Signature: ______________________

Name: ______________________ **Name:** ______________________
Job Title: ______________________ Job Title: ______________________
Organization: ______________________ Organization: ______________________
Signature: ______________________ Signature: ______________________

Job Performance Requirements

Job Performance Requirements

The candidate must complete each job performance requirement (JPR) in accordance with the standards of the authority having jurisdiction (AHJ) or the National Fire Protection Association (NFPA), whichever is more restrictive.

When California requirements exceed or require revision to the NFPA standard, the corresponding Office of the State Fire Marshal approved (OSFM) additions or revisions appear shaded in gray.

All JPRs must be completed within a California fire agency or State Fire Training Accredited Regional Training Programs (ARTP).

Each JPR shall be evaluated after the candidate initiates the task book.

Each task must be performed twice.

- The two instances must occur during two different courses.
- The same evaluator cannot sign off on the same task twice.
- In the tables, E1 represents the candidate's first evaluation and E2 represents their second evaluation.

Examples of correct and incorrect evaluation:

Correct: Task completed during two separate courses and evaluated by two separate individuals.

1. Assemble a comprehensive burn plan ("burn book") that contains all documentation necessary to conduct a live fire training evolution in accordance with NFPA standards and the policies and procedures of State Fire Training (SFT) and the authority having jurisdiction (AHJ).	**Course Code (E1)**	**Date (E1)**	**Initials (E1)**	**Course Code (E2)**	**Date (E2)**	**Initials (E2)**
a. Describe purpose of a live fire burn plan	AAA123	2/8/18	JAS	BBB123	5/15/18	CWJ
b. Identify components of a live fire burn plan ("burn book")	AAA123	2/8/18	JAS	BBB123	5/15/18	CWJ
c. Identify records-retention requirements for burn plans	AAA123	2/8/18	JAS	BBB123	5/15/18	CWJ

Incorrect: Task completed twice during one course but evaluated by two separate individuals.

1. Assemble a comprehensive burn plan ("burn book") that contains all documentation necessary to conduct a live fire training evolution in accordance with NFPA standards and the policies and procedures of State Fire Training (SFT) and the authority having jurisdiction (AHJ).	**Course Code (E1)**	**Date (E1)**	**Initials (E1)**	**Course Code (E2)**	**Date (E2)**	**Initials (E2)**
a. Describe purpose of a live fire burn plan	AAA123	2/8/18	JAS	AAA123	2/8/18	CWJ
b. Identify components of a live fire burn plan ("burn book")	AAA123	2/8/18	JAS	AAA123	2/8/18	CWJ
c. Identify records-retention requirements for burn plans	AAA123	2/8/18	JAS	AAA123	2/8/18	CWJ

Incorrect: Task completed during two separate courses but evaluated by the same individual.

1. Assemble a comprehensive burn plan ("burn book") that contains all documentation necessary to conduct a live fire training evolution in accordance with NFPA standards and the policies and procedures of State Fire Training (SFT) and the authority having jurisdiction (AHJ).	**Course Code (E1)**	**Date (E1)**	**Initials (E1)**	**Course Code (E2)**	**Date (E2)**	**Initials (E2)**
a. Describe purpose of a live fire burn plan	AAA123	2/8/18	JAS	BBB123	5/15/18	JAS
b. Identify components of a live fire burn plan ("burn book")	AAA123	2/8/18	JAS	BBB123	5/15/18	JAS
c. Identify records-retention requirements for burn plans	AAA123	2/8/18	JAS	BBB123	5/15/18	JAS

Course Administration and Application

1. Course administration and orientation	Course Code (E1)	Date (E1)	Initials (E1)	Course Code (E2)	Date (E2)	Initials (E2)
a. Complete and submit course scheduling request						
b. Order student textbooks (if applicable)						
c. Identify facility requirements						
d. Confirm facilities set up and safety						
e. Identify classroom requirements						
f. Confirm equipment (based on number of students)						
g. Complete instructor assignments						
h. Organize skill stations (location, equipment, timing, complexity)						
i. Confirm prop set up and safety						
j. Complete class rosters						
k. Review course syllabus						

Introduction to Tower Rescue

2. Introduction to Tower Rescue (Topic 2-1)	Course Code (E1)	Date (E1)	Initials (E1)	Course Code (E2)	Date (E2)	Initials (E2)
a. Identify types of towers						
b. Define a “tower rescue” incident						
c. Identify factors that determine incident complexity						
d. Identify towers common to the AHJ						
e. Describe tower components and construction						
f. Describe hazards associated with operating on and around towers						
3. Standards and Regulations (Topic 2-2)	**Course Code (E1)**	**Date (E1)**	**Initials (E1)**	**Course Code (E2)**	**Date (E2)**	**Initials (E2)**
a. Identify industry standards applicable to tower rescue						
b. Identify industry regulations applicable to tower rescue						
c. Describe how Cal/OSHA 3270.1 applies during training versus during a rescue event						
d. Identify AHJ policies and procedures						
e. Identify owner/operator policies and procedures						

Incident Size Up and Planning

4. Size Up a Tower Rescue Incident (Topic 3-1)	Course Code (E1)	Date (E1)	Initials (E1)	Course Code (E2)	Date (E2)	Initials (E2)
a. Describe the components of a tower rescue size up						
b. Describe a risk/benefit assessment						
c. Describe types of reference materials and their uses						
d. Describe availability and capability of resources						
e. Describe elements of an incident action plan and related information						
f. Describe how size up relates to the incident management system						
g. Describe information gathering techniques and how that information is used in the size-up process						
h. Describe basic search criteria for tower rescue incidents						
i. Describe how to develop and adhere to contingency plans						
j. Read technical rescue reference materials						
k. Gather information						
l. Use interview techniques						
m. Relay information						
n. Use information-gathering sources						
5. Recognize the Need for Technical Rescue Resources (Topic 3-2)	**Course Code (E1)**	**Date (E1)**	**Initials (E1)**	**Course Code (E2)**	**Date (E2)**	**Initials (E2)**

a. Describe operational protocols						
b. Identify specific planning forms						
c. Describe types of incidents common to the AHJ						
d. Describe hazards						
e. Describe incident support operations and resources						
f. Describe safety measures						
g. Apply operational protocols						
h. Select specific planning forms based on the types of incidents						
i. Identify and evaluate various types of hazards within the AHJ						
j. Request support and resources						
k. Determine the required safety measures						
6. Recognize Incident Hazards and Initiate Isolation Procedures (Topic 3-3)	**Course Code (E1)**	**Date (E1)**	**Initials (E1)**	**Course Code (E2)**	**Date (E2)**	**Initials (E2)**
a. Describe types and nature of incident risks and hazards						
b. Describe resource capabilities and limitations						
c. Describe equipment types and their use						
d. Describe isolation terminology, methods, equipment, and implementation						
e. Describe operational requirement concerns						
f. Describe methods for controlling access to the scene						
g. Describe types of technical references						

h. Identify resource capabilities and limitations						
i. Identify incident hazards						
j. Assess potential hazards to rescuers and bystanders						
k. Place scene control barriers						
l. Operate control and mitigation equipment						
7. Isolate and Manage Exposure to Potentially Harmful Energy Sources (Topic 3-4)	**Course Code (E1)**	**Date (E1)**	**Initials (E1)**	**Course Code (E2)**	**Date (E2)**	**Initials (E2)**
a. Describe types and uses of PPE						
b. Describe hazardous energy monitoring and testing equipment						
c. Describe types of energy sources						
d. Describe system isolation methods						
e. Describe specialized system features						
f. Describe tools for disabling hazards						
g. Describe AHJ policies and procedures						
h. Select and use hazard-specific PPE						
i. Use energy monitoring and testing equipment						
j. Identify hazardous energy sources						
k. Operate beneficial systems in support of tactical objectives						
l. Operate tools and devices for securing and disabling hazards						
m. Engage in practices that minimize exposure to known or suspected hazards						

8. Assess the Integrity of a Tower Structure (Topic 3-5)	Course Code (E1)	Date (E1)	Initials (E1)	Course Code (E2)	Date (E2)	Initials (E2)
a. Describe types of structures within area of response						
b. Describe potential structural compromise that would create additional hazards to rescuers						
c. Perform physical inspection of accessible tower components in accordance with a pre-climb checklist						
9. Support an Operations- or Technician-level Incident (Topic 3-6)	**Course Code (E1)**	**Date (E1)**	**Initials (E1)**	**Course Code (E2)**	**Date (E2)**	**Initials (E2)**
a. Describe AHJ operational protocols						
b. Describe hazard recognition						
c. Describe incident management						
d. Describe PPE selection						
e. Describe how to select and use resources						
f. Describe scene support requirements						
g. Apply operational protocols						
h. Function within the incident management system						
i. Follow and implement an incident action plan						
j. Report the task progress status to a supervisor or incident command						
10. Select and Use PPE, Tools, and Equipment (Topic 3-7)	**Course Code (E1)**	**Date (E1)**	**Initials (E1)**	**Course Code (E2)**	**Date (E2)**	**Initials (E2)**
a. Identify PPE used during tower rescue incidents						

b. Identify the protections provided by PPE during tower rescue incidents						
c. Identify the limitations of PPE during tower rescue incidents						
d. Identify when and how to don and doff PPE						
e. Don and doff PPE						
f. Describe how to use tower rescue tools and equipment						
g. Identify guidelines for cleaning, inspecting, and maintaining tools and equipment						
h. Describe methods for cleaning tools and equipment						
i. Identify when and how to remove tools and equipment from service						
j. Select, use, and maintain tools and equipment						
11. Utilize Fall Protection and Positioning Equipment (Topic 3-8)	**Course Code (E1)**	**Date (E1)**	**Initials (E1)**	**Course Code (E2)**	**Date (E2)**	**Initials (E2)**
a. Describe how to review a tower rescue preplan to gain familiarity with tower climber safety and work positioning equipment						
b. Describe fall factor and its effects on anchors, equipment, and people						
c. Define fall arrest						
d. Define fall arrest attachments						
e. Define fall restraint						
f. Define fall restraint attachments						
g. Define work positioning device systems						

h. Define travel restraint						
i. Describe fall protection devices and their applications						
j. Operate tower fall protection and work positioning equipment						
12. Develop an Incident Action Plan (Topic 3-9)	**Course Code (E1)**	**Date (E1)**	**Initials (E1)**	**Course Code (E2)**	**Date (E2)**	**Initials (E2)**
a. Describe the components of an IAP						
b. Describe considerations that help develop an IAP						
c. Describe how to combine multiple actions and information sources into a cohesive plan						
d. Use a tactical worksheet						

Victim Management

13. Assess a Victim (Topic 4-1)	**Course Code (E1)**	**Date (E1)**	**Initials (E1)**	**Course Code (E2)**	**Date (E2)**	**Initials (E2)**
a. Describe how to establish victim rapport						
b. Identify victim assessment considerations						
c. Assess a victim (implement tactics and employ tools identified in preplan to achieve objective)						
14. Remove a Victim from a Tower Environment (Topic 4-2)	**Course Code (E1)**	**Date (E1)**	**Initials (E1)**	**Course Code (E2)**	**Date (E2)**	**Initials (E2)**
a. Describe how to secure a victim to prevent falling						
b. Describe how to package a victim						

c. Describe when and how to use packaging equipment						
d. Describe how to connect a packaged victim to control lines						
e. Describe how to move victim to desired location						
f. Employ tactics identified in rescue preplan for removal of a victim on a tower						

Tower Operations

15. Perform a Rescue from a Ladder or Elevated Device (Topic 5-1)	**Course Code (E1)**	**Date (E1)**	**Initials (E1)**	**Course Code (E2)**	**Date (E2)**	**Initials (E2)**
a. Describe how to use ladders or elevated devices for tower rescue						
b. Describe specific procedures for using ladders or elevated devices in victim transfer from a tower						
c. Work from or operate ladders or elevated devices capable of accessing and rescuing the tower victim and transferring from the tower to the elevated device while providing fall protection for the victim and rescue personnel						
16. Participate in an Initial-contact Evaluation (Topic 5-2)	**Course Code (E1)**	**Date (E1)**	**Initials (E1)**	**Course Code (E2)**	**Date (E2)**	**Initials (E2)**
a. Describe the purpose of an initial-contact evaluation						
b. Describe the components of an initial-contact evaluation						
c. Select and transport designated tools						

17. Ascend a Tower to Conduct a Rescue (Topic 5-3)	Course Code (E1)	Date (E1)	Initials (E1)	Course Code (E2)	Date (E2)	Initials (E2)
a. Describe a pre-climb checklist						
b. Describe system safety check protocols						
c. Describe the application and limitations of climbing, positioning, and fall protection systems						
d. Describe how to use fall protection equipment						
e. Describe how to ascend a tower vertically						
f. Describe how to descend a tower						
g. Describe how to transfer between integrated vertical lifeline systems						
h. Describe how to traverse a tower horizontally						
i. Describe how to place and use work positioning equipment						
j. Determine proper PPE, tools, and equipment given the type of tower structure and integrated temporary or permanent safety systems						
k. Don appropriate PPE, including but not limited to fall protection, helmet, and gloves as appropriate						
l. Perform system safety checks						
m. Use 100% tie off or vertical lifeline equipment systems to ascend the tower structure (instructor has to do both; student has to demonstrate one or the other)						
n. Transfer between integrated vertical lifeline systems						
o. Traverse a tower horizontally using a 100% tie off fall protection system						

p. Use positioning equipment to support the weight of the rescuer permitting the rescuer to perform a task						
q. Describe climbing plan						
r. Perform climbing techniques and methods						
18. Rescue a Suspended Victim Using a Ground-Based Control System (Topic 5-4)	**Course Code (E1)**	**Date (E1)**	**Initials (E1)**	**Course Code (E2)**	**Date (E2)**	**Initials (E2)**
a. Identify when to use a ground-based system that can accommodate vertical and horizontal movement						
b. Describe the tools and equipment used for a ground-based tower rescue						
c. Describe how to establish anchors						
d. Describe how to construct a control line system that accounts for vertical and horizontal movement						
e. Describe how to transfer a victim from an existing fall arrest system to a control line system						
f. Describe how to move a victim vertically and horizontally						
g. Describe safety considerations associated with ground-based control systems						
h. Construct a control line system that accounts for vertical and horizontal movement						
i. Transfer a victim from an existing fall arrest system to a control line system						
j. Move a victim vertically and horizontally						
19. Rescue a Suspended Victim Using a Tower-Based Control System (Topic 5-5)	**Course Code (E1)**	**Date (E1)**	**Initials (E1)**	**Course Code (E2)**	**Date (E2)**	**Initials (E2)**
a. Identify when to use a tower-based system that can accommodate vertical and horizontal movement						

b. Describe the tools and equipment used for a tower-based tower rescue						
c. Describe how to establish anchors						
d. Describe how to construct a control line system that accounts for vertical and horizontal movement						
e. Describe how to transfer a victim from an existing fall arrest system to a control line system						
f. Describe how to move a victim vertically and horizontally						
g. Describe safety considerations associated with tower-based control systems						
h. Construct a control line system that accounts for vertical and horizontal movement						
i. Transfer a victim from an existing fall arrest system to a control line system						
j. Move a victim vertically and horizontally						
20. Rescue a Victim Using Multiple Control Systems (Topic 5-6)	**Course Code (E1)**	**Date (E1)**	**Initials (E1)**	**Course Code (E2)**	**Date (E2)**	**Initials (E2)**
a. Identify when and where to use multiple control systems						
b. Describe the tools and equipment used for multiple control systems						
c. Describe how to establish anchors						
d. Describe how to construct multiple control systems that account for vertical and/or horizontal movement						
e. Describe how to transfer a victim from one control system to another control system						
f. Describe how to move a victim vertically and/or horizontally						

g. Describe safety considerations associated with multiple control systems						
h. Construct multiple control systems that account for vertical and/or horizontal movement						
i. Transfer a victim from one control system to another control system						
j. Move a victim vertically and/or horizontally						
21. Direct a Tower Rescue Team (Topic 5-7)	**Course Code (E1)**	**Date (E1)**	**Initials (E1)**	**Course Code (E2)**	**Date (E2)**	**Initials (E2)**
a. Describe how to direct a tower rescue team						
b. Direct the employment of tactics identified in the rescue preplan to remove a victim on a tower						

Termination

22. Terminate an Incident (Topic 6-1)	**Course Code (E1)**	**Date (E1)**	**Initials (E1)**	**Course Code (E2)**	**Date (E2)**	**Initials (E2)**
a. Describe PPE characteristics						
b. Identify hazard and risk identification						
c. Describe equipment removal procedures						
d. Describe isolation techniques						
e. Identify statutory requirements						
f. Identify responsible parties						
g. Describe accountability system use						

h. Describe documentation and reporting requirements						
i. Describe post-incident analysis techniques						
j. Select and use hazard-specific PPE						
k. Decontaminate PPE						
l. Use barrier protection techniques						
m. Implement data collection and record-keeping/reporting protocols						
n. Conduct post-incident analysis activities						

Application

23. Set up, demonstrate, and oversee drill ground operations and/or demonstrations	**Course Code (E1)**	**Date (E1)**	**Initials (E1)**	**Course Code (E2)**	**Date (E2)**	**Initials (E2)**
a. Size up a tower rescue incident						
b. Develop and adhere to contingency plans						
c. Recognize the need for technical rescue resources						
d. Recognize incident hazards and initiate isolation procedures						
e. Select and use hazard-specific PPE and equipment to isolate and manage exposure to potentially harmful energy sources						
f. Minimize exposure to known or suspected hazards						
g. Perform physical inspection of accessible tower components						
h. Support an operations- or technician-level incident						

i. Don and doff PPE						
j. Select, use, and maintain tools and equipment						
k. Operate tower fall protection and work positioning equipment						
l. Develop an incident action plan for a tower rescue incident on a structure whose size, shape, or configuration would accommodate only one rescuer (required)						
m. Develop an incident action plan for other scenarios as determined by instructor applicable to the AHJ service area (optional)						
n. Terminate an incident						
o. Ascend a tower to the level of the victim using a 100% tie off fall protection system						
p. Ascend a tower to the level of the victim using a vertical lifeline fall protection system						
q. Ascend a tower using a ladder						
r. Ascend a tower using pegs						
s. Ascend a tower using lattice						
t. Conduct an initial-contact evaluation						
u. Descend a tower						
v. Transfer between integrated vertical lifeline systems (including a self-safety check)						
w. Traverse a tower horizontally using a 100% tie off fall protection system						
x. Place and use work positioning equipment permitting the rescuer to perform a task						

y. Assess a victim						
z. Package a victim in a harness						
aa. Package a victim in a litter						
bb. Package a victim in a tower at elevation						
cc. Secure a harnessed victim to a tower						
dd. Connect a packaged victim to control lines						
ee. Move a victim vertically on a ground-controlled system						
ff. Move a victim vertically on tower-controlled system						
gg. Move a victim horizontally on a ground-controlled system						
hh. Move a victim horizontally on tower-controlled system						
ii. Transfer a victim from a tower to ladder (optional/recommended)						
jj. Transfer a victim from a tower to an elevated device while providing fall protection for the victim and rescue personnel (optional/recommended)						
kk. Transfer a victim from one control system to another control system						
ll. Transfer a suspended victim from an existing fall arrest system to a ground-based control system						
mm. Transfer a suspended victim from an existing fall arrest system to a tower-based control system						
nn. Direct a tower rescue team to remove a victim from a tower						
oo. Work from or operate ladders capable of accessing and rescuing a tower victim (optional/recommended)						

pp. Work from or operate elevated devices capable of accessing and rescuing a tower victim (optional/recommended)						
qq. Construct a ground-based control system that can accommodate vertical and horizontal movement						
rr. Operate a ground-based control system to move a victim vertically and horizontally						
ss. Construct a tower-based control system that can accommodate vertical and horizontal movement						
tt. Operate a tower-based control system to move a victim vertically and horizontally						
uu. Construct multiple control line systems that can accommodate vertical and/or horizontal movement						
vv. Operate multiple control systems to move a victim vertically and/or horizontally						

Completion Requirements

The following requirements must be completed prior to submitting this task book.

Experience

The candidate meets the following experience requirements.

- Have a minimum of three years' full-time or six years' volunteer or part-time paid suppression/rescue experience in a recognized fire agency in California

Agency	Experience	Start Date	End Date

Include documentation to verify prerequisite requirements when you submit your instructor task book unless verification is already documented in your SFT User Portal.

Position

State Fire Training confirms that there are no position requirements for instructor registration.

Updates

The candidate has completed and enclosed all updates to this instructor task book released by State Fire Training since its initial publication.

Number of enclosed updates: _____

Completion Timeframe

A candidate must complete a task book within three years of its initiation date. Otherwise, a candidate must initiate a new task book using the curriculum's current published version.

Initiation Date (see Initiation Date under Initiation Requirements): _____

Review and Approval

Candidate

Candidate (please print): _____

I, the undersigned, am the person applying to teach Tower Rescue Technician. I hereby certify under penalty of perjury under the laws of the State of California, that the completion of all requirements documented herein is true in every respect. I understand that misstatements, omissions of material facts, or falsification of information or documents may be cause for rejection or revocation.

Signature: _____ Date: _____

Fire Chief

Candidate's Fire Chief (please print): _____

I, the undersigned, am the person authorized to verify the candidate's qualifications to teach Tower Rescue Technician. I hereby certify under penalty of perjury under the laws of the State of California, that the completion of all requirements documented herein are true in every respect. I understand that misstatements, omissions of material facts, or falsification of information or documents may be cause for rejection.

Signature: _____ Date: _____

Tower Rescue Technician (2021) Interim Procedures

Issued: Month 2023

Procedure Changes

Edition:	May 2020 edition of the State Fire Training Procedures Manual
Effective Date:	Month, ##, 2023 (anticipated)
Section Changes:	Add the following sections: • 6.7.#: Tower Rescue Technician Instructor
Justification:	Following approval by the State Board of Fire Services (SBFS), the new Tower Rescue Technician (2021) curriculum will go into effect on March 1, 2024. The new curriculum provides directive for Instructor qualifications.
SFT Contact:	SFT Staff assigned to Instructor Registration.
Note:	Using the May 2020 edition of the State Fire Training Procedures Manual: • Add Section 6.7.#.

6.7.#: TOWER RESCUE TECHNICIAN INSTRUCTOR

6.7.#.1: Eligible Courses

Table 6.7.#.1: Tower Rescue Technician Instructor Eligible Courses

CFSTES Courses	FSTEP Courses
• None	• Tower Rescue Technician

6.7.#.2: General Qualifications

A. A Tower Rescue Technician Instructor shall meet the qualifications required of all State Fire Training (SFT) Registered Instructors.
   1. See **6.2.1: Qualifications**.

6.7.#.3: Course Work

A. A Tower Rescue Instructor must have attended and passed:
   1. SFT Tower Rescue Technician

6.7.#.4: Instructor Requirements

A. See **6.2.1.2: Instructor Requirements**.

6.7.#.5: Teaching Experience

A. None

6.7.#.6: Task Book

A. A Tower Rescue Technician Instructor candidate must complete a task book within three years of its initiation date. Otherwise, a candidate must initiate a new task book using the curriculum's current published version.

B. A Tower Rescue Technician Instructor candidate must satisfy all instructor requirements and become a Registered Instructor within one year of completing his or her task book.

6.7.#.7: Professional Experience

A. A. Tower Rescue Technician Instructor shall meet the professional experience qualifications listed below.
   1. Performing in an "acting" capacity does not qualify.

Table 6.7.#.7: Tower Rescue Technician – Professional Experience

FSTEP Courses	Experience
• Tower Rescue Technician	• Have a minimum of three years' full-time or six years' volunteer or part-time paid suppression/rescue experience in a recognized fire agency in California

6.7.#.8: Application

A. See **6.2.3: Application Process**.

6.7.#.9: Maintenance

A. A Registered Tower Rescue Technician Instructor shall teach at least two SFT Tower Rescue Technician courses every four years.